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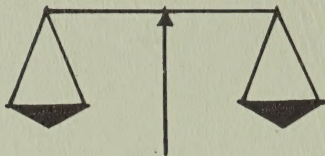
*Permalawn
Products
Company*

1942



Garden Aids

Cooperate With Nature



A SCIENTIFIC SERVICE

Occasionally a beautiful lawn or garden may be produced without any definite program of maintenance. But generally the maintenance program, to be effective, must be adjusted to the growth conditions existing, supplementing favorable conditions and correcting those which are not conducive to best results.

We offer our patrons the most complete and effective Garden Service available, Under the direction of Dr. J. F. Fonder, soil technologist and plant physiologist, with years of experience in analyzing growth conditions and preparing efficient maintenance programs, this service provides a really scientific approach to your garden problems. It can supply a logical working basis and guide for the home owner, the professional gardener, the landscape contractor, the professional landscape architect, or the park superintendent.

A COMPLETE SERVICE

1. An inspection and analysis of existing growth conditions as concerns shading, ventilation, drainage, and the like.
2. A soil survey and analysis to determine the areas involved, differences in soil type, and the supply of available plant food in the soil in different locations.
3. The submission of a suggested program of maintenance covering an explanation of adverse growth factors with possible remedial measures.

A follow-up service to adjust the program to changing conditions.

During the past six years this service has aided many engaged in maintenance and construction work to secure better lawns and gardens and to avoid wasted effort and needless expenditures. It is offered to our patrons to assist them in securing the best possible results from our products. Those customers too far removed from Evanston to make an inspection possible, or where the program will not justify an inspection will, upon request, be sent full instructions for submitting soil samples and other information needed in formulating a maintenance program.

Since our business is being built upon the foundation of Better Service to our customers it follows that the products we sell must be good or our Service will mean nothing. Careful thought and observation, guided by a scientific appreciation of the fundamentals required in garden supplies of various types, govern us in the selection of the products we recommend. We believe this can mean much to our patrons.

Permalawn Products Company

SPECIALTY PRODUCTS FOR BETTER GARDENING
AND TREE CULTURE.

For Local Orders Phone University 2260

In Your Garden This Year

"KEEP THEM GROWING"

OUR all-out effort in national defense makes your garden more important to you and perhaps to others, than it has been for many, many years. Yes, there's the necessity for producing vegetables where such production is practical. But from the broader view, your garden can mean more to America as a place where people, weary with the struggle of a nation keyed to super-human effort, may find relaxation and peace at the end of the day, thus gaining strength for the greater effort of tomorrow.

THE United States Department of Agriculture has asked that everyone produce as much in his garden as possible. Stress is placed on the vegetable garden because it may be an important source of high vitality and health giving food. But berry bushes and fruit trees are just as important. Perhaps they have been neglected for many years now but the part they can play in the battle for freedom must bring them better days. Trim them, feed them, and spray them, and let there be no more neglect anywhere in the garden.

BUT in this "all-out effort" in the garden there must be none of the hysteria that marked the gardens of World War No. I. There is no need at all to spade up any lawn area or to destroy perennial beds you have worked in so long. Gardens should be planted only where they will do well, as otherwise seeds, and valuable time and effort may be wasted. Above all, if you plant a garden be sure it is no larger than you can care for through harvest and that everything produced will be utilized to advantage. If you have more area than you need, there is a neighbor close by who would be glad of an opportunity to help "Keep Them Growing".

TREE HUNGER

by Edgar A. Guest

He planted deep a maple tree, but he forgot to feed it.

Somewhere he got the notion strange that maples didn't need it.

I had the self-same thought myself in days when I was younger.

I fancied only man and beasts were prey to thirst and hunger.

Time was I bought a tree or two to deck my lawn and garden,

And now I pray my ignorance the Lord above will pardon.

I left them braving wind and rain through seasons unattended,

For when their roots I'd covered deep I thought my duty ended.

I watched them struggle with despair. I watched them slowly sicken.

I wondered could there be a way a maple's growth to quicken.

And then I asked a man who knew. He looked them over sadly:

"Your trees are starving, sir!" said he. "'Tis food they're wanting badly."

Man feeds his dog from day to day and food for birds he'll scatter.

But never thinks to feed his trees—that's quite a different matter.

So here I pass this hint along for all like me who need it,

If you've a tree you want to raise, in spring be sure to feed it.

Reprinted by Special Arrangement.

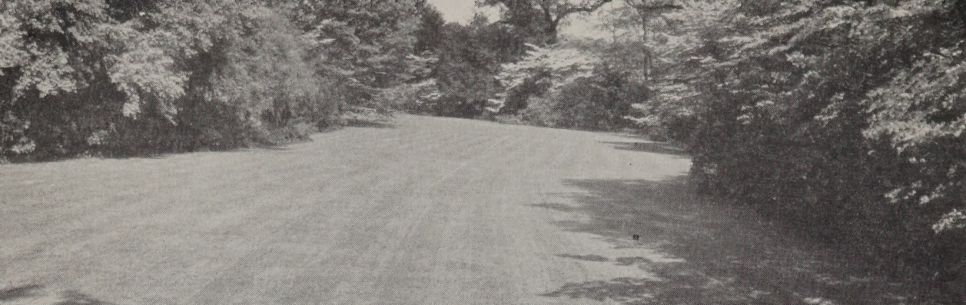
A VICTORY GARDEN ON 500 SQUARE FEET

Cost: Seed, \$2.00; Fertilizer, \$1.50; Disease and Insect Control, \$2.50.

Selected varieties of each seed are furnished with directions for planting and growing.

Kind of Vegetable	No. 10' Rows	Width of Row	When to Seed			Ready to use
			Inside	Outside	Every 2 Weeks	
Tomato	3	2 ft.	March	May		15-18 weeks
Corn	4	2 ft.		May	to July	8- 9 weeks
Peas	4	18 inches		April	to July 15	8- 9 weeks
Beans (green)	4	18 inches	March	May	to Sept.	6- 8 weeks
Beans (wax)	4	18 inches		May	to Sept.	6- 8 weeks
Beans (Lima)	2	18 inches		May		12-15 weeks
Onion (sets)	1	15 inches		April		6-12 weeks
Onion (seed)	1	15 inches		April		6-12 weeks
Pepper	¾	15 inches		May		15-18 weeks
Parsley	¼	15 inches		April		10-12 weeks
Swiss Chard	1	15 inches		May		6- 8 weeks
Beets	2	15 inches		May	2nd July 1	6- 8 weeks
Turnip	1	15 inches		April	2nd July 15	8-10 weeks
Carrot	2	15 inches		May	2nd July 1	8- 9 weeks
Lettuce (L)	1	15 inches		April	to Sept.	6- 7 weeks
Radish	1	15 inches		April	to Sept.	4- 5 weeks

Above Assortment, \$2.00



Many a good lawn is ruined by improper clipping. Cut at a height of $1\frac{1}{4}$ to $1\frac{1}{2}$ inches spring, summer, and fall.

PERMALAWN

PERMANENT TURF GRASSES

Only a limited number of grasses are suitable for lawn purposes in the northern part of the United States. These include (1) Kentucky Bluegrass, (2) New Zealand Chewing's Fescue, (3) Poa trivialis (shade only), and (4) the various bent grasses. These are permanent grasses, fine in texture, beautiful in color, and any good lawn seed blend must be built around them.

SEED BLENDS

Better results will be secured if the turf grasses, which germinate slowly and grow slowly when young, are sown in conjunction with quick germinating and rapid growing nurse grasses, such as Red Top and Rye Grass, but the proportion of the seeds of the nurse grasses must be small as otherwise they will crowd out the turf grasses instead of helping them develop. Permalawn Sunny and Semi-Shady blends contain only 25 percent of Red Top and Permalawn Shady but 20 percent.

Lawn seed mixtures cannot be judged on the basis of "quick" results. The "four day" lawn will usually be a temporary lawn.

PERMALAWN SEEDS

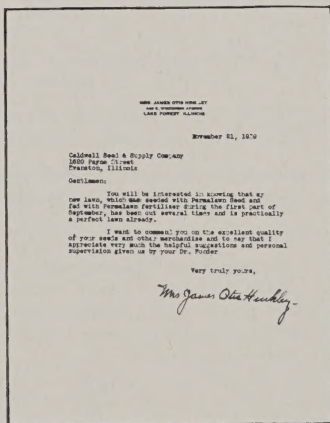
Permalawn Seeds contain only the highest quality Kentucky Bluegrass, New Zealand Chewing's Fescue, Poa trivialis, Astoria Bent, and Red Top seed, blended in scientifically correct proportions to produce beautiful and permanent lawns in their respective growth

situations. For your protection, only heavy, mature seeds of highest purity and germination, and lowest weed seed content are used in blending Permalawn Seeds.

PERMALAWN SUNNY: Produces a most beautiful, velvety, permanent lawn. (If desired without Astoria Bent, so specify). 1 lb., 55c; 5 lbs., \$2.75; 10 lbs., \$5.40, 25 lbs., \$13.00; 50 lbs., \$25.50; 100 lbs., \$50.00.

PERMALAWN SEMI-SHADY: A combination of the Permalawn Sunny and Shady for-

mulae. 1 lb., 70c; 5 lbs., \$3.50; 10 lbs., \$6.90; 25 lbs., \$17.00; 50 lbs., \$33.00; 100 lbs., \$65.00. **PERMALAWN SHADY:** Contains 60 per cent of Chewing's Fescue and Poa trivialis combined. 1 lb., 75c; 5 lbs., \$3.75; 10 lbs., \$7.40; 25 lbs., \$18.25; 50 lbs., \$35.50; 100 lbs., \$70.00.



**Permalawn
Service**

We offer our patrons the most complete and effective Lawn Service available.

RESULTS PROVE ECONOMY

Superior LAWN SEEDS

WHERE TO USE

Sunny Seed:

Areas in full sunlight.
Areas in sun at high noon.

Semi-Shady Seed:

Areas in full morning sun.
Areas in light shade.

Shady Seed:

Areas in moderate shade.
Areas in early morning and
late afternoon sun.

A beautiful lawn does not just happen—it is made with good seed and years of proper care.

GOOD VENTILATION IMPORTANT

Lawn grasses grow better in extensive areas where the air has an opportunity to move freely across them than in restricted and poorly ventilated locations. To wall in a lawn area or plant a heavy screening border of shrubs, which frequently reaches to the bottom branches of an already existing circle of trees, is to shut out the beneficial air currents which dry the grass of dew before the heat of day and aid in proper cooling of the plants. Under such conditions a general weakening of the grass may always be expected and in very hot and humid periods during the summer it is usual for damage due to overheating, scald, brown patch, and leaf spot to be much more severe than in areas where ventilation is not interfered with.

A WISE PRECAUTION

The incorporation of the correct Permalawn Plant Food in the seed bed before sowing will cause the young plants to grow vigorously and lessen the danger of damage from heat for the spring seeding and of winter injury for the fall seeding. This simple precaution may mean the difference between success and failure.

SEED LIGHTLY

It is better to sow too little seed than too much, with its resultant crowding-out of the desirable turf grasses. Permalawn Seeds should be seeded at the rate of 4 pounds per 1000 square feet in sunny areas, 5 pounds per 1000 square feet in semi-shady areas, and 6 pounds per 1000 square feet in shady areas.

QUALITY LAWN SEEDS

Permalawn Superior Lawn Seeds — See opposite page.

CALDWELL QUALITY LAWN SEED: Second in quality to **Permalawn** but superior to the so-called "quality" seeds usually offered at about the same prices. These blends are of an excellent grade and are recommended where the superior quality of **Permalawn** is not essential.

Caldwell Sunnylawn:

1 lb., 50c; 5 lbs., \$2.40; 10 lbs., \$4.70; 25 lbs., \$11.75; 50 lbs., \$22.00; 100 lbs., \$44.00

Caldwell Shadylawn:

1 lb., 60c; 5 lbs., \$2.90; 10 lbs., \$5.70; 25 lbs., \$14.00; 50 lbs., \$27.00; 100 lbs., \$54.00

NORTH SHORE BRAND Lawn Seed: Prepared from the same quality seeds as Caldwell Quality but contains Rye Grass as one of the nurse grasses. A good seed where a quicker cover is desired without sacrificing the future quality of the lawn.

North Shore Sunny:

1 lb., 40c; 5 lbs., \$1.90; 10 lbs., \$3.70; 25 lbs., \$9.00; 50 lbs., \$17.50; 100 lbs., \$34.00

North Shore Shady:

1 lb., 55c; 5 lbs., \$2.70; 10 lbs., \$5.30; 25 lbs., \$13.00; 50 lbs., \$25.50; 100 lbs., \$50.00

SUNNY LANDSCAPE—Special mixture blended for landscape architect desiring a good grade of seed at a competitive price. This mixture will give quicker results, but will produce good permanent lawns. 1 lb., 30c; 10 lbs., \$2.90; 25 lbs., \$7.00; 50 lbs., \$13.00; 100 lbs., \$25.00

Quality Lawn Seeds

ITS
WELL TO
KNOW

PREPARING THE NEW SEED BED

The future excellence of the lawn depends largely upon whether the permanent level of the surface is secured before the seed is sown. After the soil is pulverized it should be allowed to settle for several

days or should be rolled heavily to establish the high and low areas, which then should be leveled. An approximate level of the new surface should always be obtained *before* peat moss, sand, plant food, or other materials are incorporated in the soil. After these materials are thoroughly incorporated the area should be raked carefully to produce a perfectly level surface.

MISCELLANEOUS LAWN SEEDS

	1 lb.	5 lbs.	10 lbs.	25 lbs.	50 lbs.
Kentucky Blue Grass					
21 lb. per bu. 85% purity	35c	\$1.60	\$ 3.00	\$ 7.15	\$14.00
24 lb. per bu. 90% purity	45c	2.25	4.20	9.50	17.50
28 lb. per bu. 98% purity	50c	2.50	4.90	11.75	22.50
Red Top 95% purity	30c	1.35	2.50	5.75	10.00
98% purity	40c	1.90	3.60	8.75	17.00
Astoria Bent (Blue Tag)	\$1.25	6.00	11.75	27.50	
Seaside Creeping Bent (Blue Tag)	\$1.15	5.50	10.75	25.00	
Canada Blue Grass, excellent for paths	45c	2.20	4.20	10.00	18.50
Chewing's Fescue (New Zealand grown) 99% purity	75c	3.50	6.90	15.75	36.00
Meadow Fescue, Not suitable for lawns	25c	1.10	1.90	4.00	7.00
Domestic Rye Grass (Suitable only as nurse grass)	25c	1.10	2.00	4.00	7.00
White Clover (99% purity)	1.30	6.45	12.30	30.50	60.00

HOW TO SEED THE LAWN

To secure an even stand of grass of uniform texture sow one half the seed in one direction and the balance in a direction at right angles to the first. Distribute the seed from as close to the ground surface as possible, preferably through a distributor such as the Permalawn Master Distributor, to avoid separation of the seeds of different weights. Seed lightly rather than heavily for the best permanent results.

CORRECT RAKING IMPORTANT

Equally as important as even distribution is the method of covering the seed to obtain good germination. The garden rake should be *pushed* across the surface, teeth down and with no pressure on the handle. The rake should not be pulled, nor pushed and pulled, as this will always produce patchiness. Mulch the surface lightly with peat moss, roll heavily, soak deeply and keep moist several weeks until all seed has germinated.



NEW LAWNS FROM OLD

A lawn gets shabby only because of neglect and will take on new life and vigor if given proper attention. The program can be carried out most effectively in the spring or early fall, the grass being in the most responsive condition during those periods.

The first step should be the removal of weeds which may be present and the leveling of the surface with top soil if necessary. Then the lawn should be given a good feeding. This will cause the old grass to start new growth and to stool or spread out, with the production of a noticeably thicker and stronger turf. This method is much more effective than a general reseeded without the use of plant food.

SEEDING BARE AREAS

Bare areas can be prepared for seeding most effectively by running the Spike Disc forward and back across them until the soil is loosened sufficiently to provide a cover for the seed and a foothold for the young grass. This method generally will be found more satisfactory and more economical than to cover the areas with new soil. Better results may be expected if peat moss is spread on the surface, one bale to 1000 sq. ft. of area.



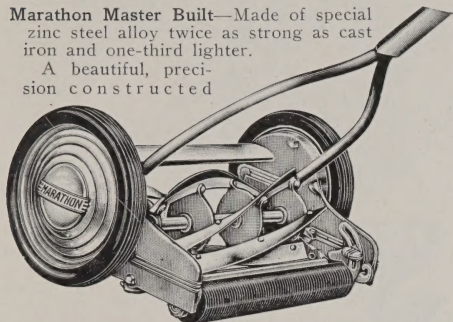
The cost of good seed is the smallest part of the cost of a new lawn.

Good Mowers Make Better Lawns

**ALL STEEL — PRECISION BUILT
NOISELESS MOWERS ARE BEST**

Marathon Master Built—Made of special zinc steel alloy twice as strong as cast iron and one-third lighter.

A beautiful, precision constructed

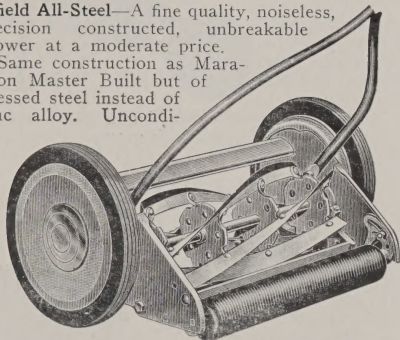


mower of finest quality, unconditionally guaranteed by the manufacturer.

Puncture proof pneumatic tires; large size rubber covered, ball bearing roller; simple finger adjustment; tubular steel, chromium plated handle with rubber grips; self adjusting ball bearings; die cast noiseless zinc alloy gears. 16 inch, \$19.95; 18 inch, \$21.50.

Sheffield All-Steel—A fine quality, noiseless, precision constructed, unbreakable mower at a moderate price.

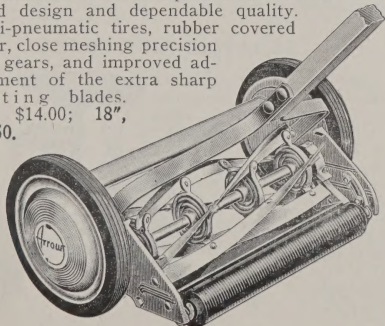
Same construction as Marathon Master Built but of pressed steel instead of zinc alloy. Uncondi-



tionally guaranteed by the manufacturer. 16 inch, \$15.95; 18 inch, \$17.95.

Arrow Mower—A modest priced mower of streamlined design and dependable quality.

Semi-pneumatic tires, rubber covered roller, close meshing precision cast gears, and improved adjustment of the extra sharp cutting blades. 16", \$14.00; 18", \$15.50.



UTILITY POWER MOWERS TAKE THE DRUDGERY OUT OF LAWN MOWING

Briggs & Stratton engine.

Clutch and mower speed control on handle bar.

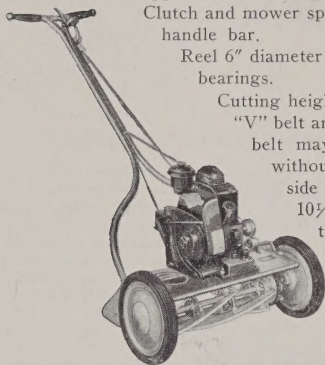
Reel 6" diameter; 5 blades, ball bearings.

Cutting height $\frac{3}{4}$ " to $1\frac{1}{2}$ ".

"V" belt and chain drive; belt may be changed without removing side frames. Wheels $10\frac{1}{2}$ ", semi-pneu. tires.

Painted Red and Gold.

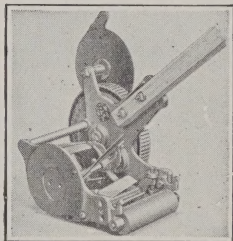
Net wt., 115 lbs.



Cutting width, 18 in., \$76.00; 19 in., \$92.00; 21 in., \$110.00.

Pennsylvania Trimmer and Edger

A time and labor saving machine which simplifies the trimming of grass borders and lawn edges. The steel disc is a powerful edging tool when the machine is turned over. Trimming width, 6 inches. Price, \$10.95, complete.



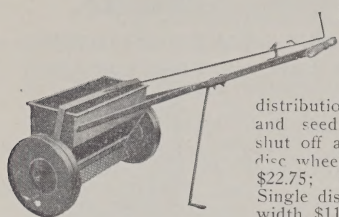
Pines Edger—The handiest type of lawn edger and turf cutter. Easy of operation. Each \$1.75.

Simplex Grass Catcher—Made of heavy canvas sides and galvanized iron bottom. No. 1 for 14"-16" mowers, \$1.55; No. 2, for 18"-20" mowers, \$1.75.

PROPER CLIPPING

The lawn should be cut high ($1\frac{1}{4}$ to $1\frac{1}{2}$ inches) throughout the year and should be cut frequently to prevent its getting too long. Good mowing equipment of ample capacity is essential.

THREE ESSENTIALS FOR A GOOD LAWN



Permalawn Master Spreaders — Strongly built spreader for the even and rapid distribution of plant food and seed. Regulator and shut off at handle. Double disc wheels—36 inch width, \$22.75; 24 inch, \$16.25; Single disc wheels—18 inch width, \$11.50; 16 inch, \$7.75.

THE SPRINGFIELD SWEEPER



This sweeper beautifies the lawn by removing all leaves, stones, twigs, clippings, and loose plant materials which otherwise would bury or become imbedded in the turf and cause damage. It operates with a soft, easy whirling, sweeping movement which cannot injure the

turf. The 15 inch diameter wheels make it as easy to operate as a lawn mower and the large capacity hopper is easily and quickly removed for emptying.

36" with pneumatic tires.....	\$ 60.00
28" with semi-pneumatic tires	48.00
28" with steel wheels.....	43.00
22" with semi-pneumatic tires.....	34.00
36" Power, Briggs & Stratton Engine....	172.00

SPIKE DISC

The spike disc is a very efficient machine in lawn maintenance and construction. The spike disc should be used in preparing thin and bare areas for reseeding, thus usually eliminating the need for top dressing soil. The spike disc also pulverizes newly spaded areas quickly and thoroughly.



The main lawn areas should be spiked several times a year and the Spike Disc will be found a most important aid in growing grass under trees. No. 30, 18 in. spiking width, as shown, \$33.00.

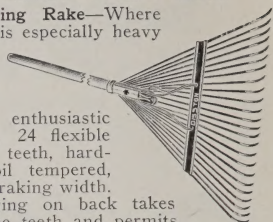
No. 32 — 18 in., same as No. 30 with two handles, \$36.50
No. 25 — 14 in. spiking width, \$23.00
No. 22 — 10 in. spiking width, \$18.50.

\$18.50. No. 18, Power Mower Model, 22½", \$67.50.

AN EXCEPTIONAL RAKE

Disston Spring Rake—Where rake duty is especially heavy

the Disston Spring Rake meets with enthusiastic approval. 24 flexible spring steel teeth, hardened and oil tempered, with 22 inch raking width. Flexible spring on back takes stress off the teeth and permits great strength with light construction. Recommended especially to the park superintendent and landscape contractor, as well as to estates and smaller homes. Each, \$1.90.

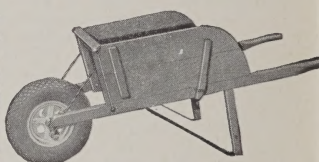


RICH VELVETY LAWNS



A proportioner for the application of soluble plant foods, brown patch fungicides, weed killers, and the like. Fits on the faucet or between two lengths of garden hose and delivers material, safely diluted, at ordinary pressures above 20 pounds. Only \$1.25, Postpaid.

Garden Wheelbarrow, De Luxe Special — Strongly constructed with body of wood; sides removable. Pneumatic

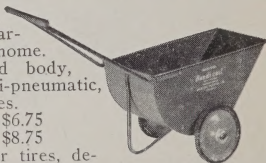


tire makes possible handling larger loads more easily, especially on rough ground. Price, \$17.60.

MASTER HANDI-CART

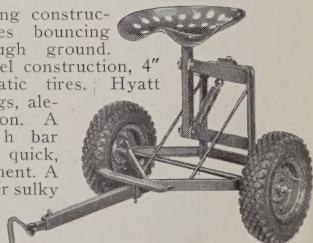
Easier to Use Than a Wheelbarrow

Handles all hauling jobs of garden, lawn, and home. Sturdily supported body, disc wheels, semi-pneumatic, puncture proof tires.
No. 1, (2 cu. ft.) \$6.75
No. 2, (3 cu. ft.) \$8.75
(With solid rubber tires, deduct \$1.50)



FLOATING-RIDE SULKY

Special spring construction eliminates bouncing even on rough ground. Fabricated steel construction, 4" x 7" pneumatic tires. Hyatt Roller Bearings, ale-mite lubrication. A special pinch bar hitch provides quick, secure attachment. A definitely better sully at a moderate price.



Delivered, with hitch for your mower, \$50.00.

GARDEN HOSE

Goodrich Garden Hose, the highest quality garden hose, is strongly constructed to stand abuse and give years of service. It is made of new, light resisting rubber which withstands summer sunshine. It costs but little more to obtain Goodrich quality.



IMPORTANT NOTICE CONSERVE YOUR HOSE!

Because of the necessity of conserving the nation's stock of rubber it is important that more than usual care be exercised to prolong the useful life of your garden hose. Guard against unnecessary wear of the outer cover by not dragging the hose around trees or corners or across drives or rough areas. Protect the hose against breakage by not kinking it to stop the flow and by not permitting cars and other heavy objects to run over it.

A more efficient use of hose can be secured by employing larger sprinklers, which utilize the full capacity of the hose. Thorough, deep soaking at longer intervals will also permit better use of hose.

BE SURE TO FEED YOUR LAWN

A well fed lawn is more drought resistant and also makes better use of water supplied. Because feeding produces a deeper and more extensive root system a longer period between sprinklings may elapse without damage. Also a lawn cut at a height of $1\frac{1}{4}$ to $1\frac{1}{2}$ inches makes better use of water and will require less frequent sprinkling.



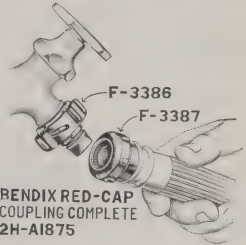
Master Chain Attachment—Attaches to the Permalawn Master spreader to brush plant food from blades of grass. Simplifies the application of soluble plant food by eliminating the principal cause of "burn". For 18" spreader, \$1.00; 24", \$1.25; 36", \$1.50.

Maxecon—Medium weight but sturdy and durable. Known as the 10 year hose. $5/8$ inch—50 ft., \$6.75; 100 ft., \$13.25; $3/4$ inch—50 ft., \$7.35; 100 ft., \$13.80. Green only.

Garden Club—A light hose designed especially for the lady gardener. $5/8$ inch—50 ft., \$5.75; 100 ft., \$11.25. Green only.

Hose prices subject to change without notice and to all government taxes applying. Offerings subject to our ability to secure stocks.

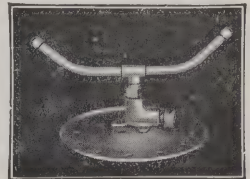
Bendix Red Cap Coupling—Rapid hose coupling, a snap and the hose is connected, a twist and it is off. Saves time and prevents kinking of hose. Guaranteed not to leak. Complete. 70c: hose end, 40c: faucet end, 30c.



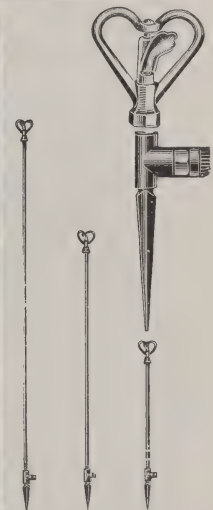
MISCELLANEOUS SPRINKLERS

No. HD, \$5.00. Covers 20-50 ft. circle at pressures of 10-15 lb.

No. HD, Jr., \$3.50. Covers 15-30 ft. circle at low pressure.



No. GS, Garden Special, \$12.50. For gardens, shrubbery, etc. Covers 65-75 ft. diameter at 15-25 lb. pressure.



Hartford Sprinklers (Blake Heads). 4 ft. length, \$2.25; 6 ft. length, \$2.50. Blake Heads, each, 75c.

SPECIALTY SPRINKLERS NEEDED IN YOUR GARDEN

PERFECTION Positive Slow Turning Sprinklers

Perfection Sprinklers save labor, permit better use of hose, sprinkle more evenly, and are economical. They are simple in design and give years of trouble free service. The disc base permits its movement over the lawn without injury.

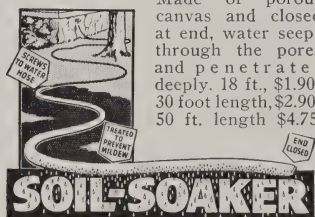


PERFORMANCE TABLE

Model No.	Pressure at Sprinkler	Size of Main Nozzle	G.P.M.	Approx. Diameter Coverage
212	20	5/32	6.1	75
"	30	"	7.0	80
"	40	"	9.2	85
315	30	3/16	12.1	90
"	40	"	14.3	95
"	50	"	16.3	100

No. 212, \$12.50; No. 315, \$15.00.

FOR TERRACE SLOPES AND PARKWAYS IT REALLY SOAKS THE SOIL

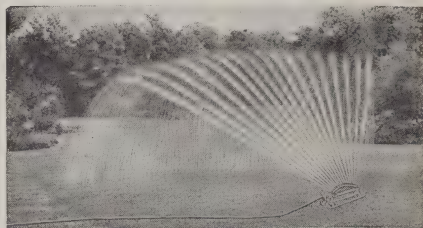


Made of porous canvas and closed at end, water seeps through the pores and penetrates deeply. 18 ft., \$1.90; 30 foot length, \$2.90; 50 ft. length \$4.75.

HOW TO SPRINKLE

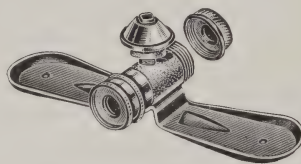
The manner of sprinkling the lawn has much to do with its general condition. Sprinkling should be done only when needed to keep the grass from turning brown and then it should be thorough. Set the sprinklers for an hour or more in each location, depending upon the discharge capacity and the texture of the soil, until the soil is soaked to a depth of several inches. Generally it is not advisable to hand sprinkle the established lawn because the patience of the operator is usually too limited to permit the application of sufficient water and the development of shallow roots will result. After soaking the soil allow it to dry out to a depth of about 1/2 inch before applying water again.

SPRINKLERS FOR SQUARE AREAS



Spray Wave Oscillating Sprinkler—2 ft. long. Sprinkles square area 40' x 40' at low pressure. Runner base will not injure lawn. Each \$19.25.

Rain Wave—Sprinkles square area 50' x 50'. Each, \$38.50.



Square Spray
Adjustable Multiple sprinklers distributing fine spray in square. Set 12 ft. apart there is no over-lapping. Adjustable

to water pressure. Each, \$1.00; Dozen, \$10.50.

The "WALKING" Lawn Sprinkler

ADVANCES AUTOMATICALLY over a predetermined course and **STOPS AUTOMATICALLY** by the use of the **SHUT-OFF**.

Creeps Along Hose Automatically at regular speed of about 20 feet per hour or, in "high", about twice that speed. Can be put in "neutral" for **Stationary Sprinkling** by flipping the driving pawls out of engagement.

Develops Own Power, yet is compact and easy to handle. The force of the whirling impeller arms is harnessed through a system of gears and ratchets to the rear wheels. No attention required except lubrication and use.

Irrigates Lawns Better because the Walking Lawn Sprinkler lays down the water just the way you want it, evenly, plentifully, over a wide course, without waste or flooding.

Labor Almost Eliminated, Water Bills Reduced: Letters and reports galore state that users are saving as much as 40% on their water bills and that they have better lawns than ever before.



Model A5-2, \$20.50; Model B3, \$27.50; Automatic Shut Off, \$5.00. All prices delivered.

SHEARS

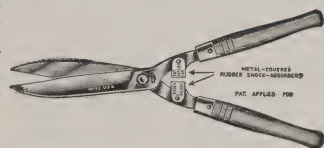
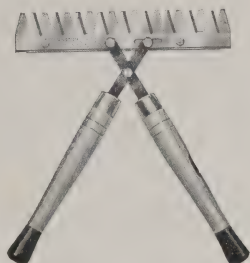
HEDGE SHEARS



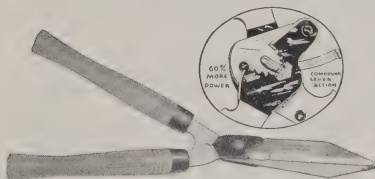
Electric Hedgeshear—A high speed sickle type electric hedge trimmer, in which the conventional sickle is replaced by an endless chain bearing special cutting teeth. Cuts on both edges of bar. More powerful, quieter, vibrationless, and will not clog. Weighs less than 6 pounds and all weight is balanced under the hand. Price,—\$29.50.

Simplicity Hedge Trimmer—A rapid hand trimmer; 12 inch width with plain teeth, \$4.50; 16 inch, notched teeth, \$5.50.

Wiss English Pattern Shock-Proof Shear—A new style of light hedge shear with improved metal covered shock absorbers. Blades of finest steel and handles of non-splitting wood, 8½ inch blades, \$3.10.



Multi-Power Hedge Shears



power with soft smooth, non-jolting action. Perfectly balanced for comfort; lightweight and ruggedly built for hard service. Blades of hardened, tempered cutlery steel. All parts replaceable. With 6 inch blades, \$1.75; with 8 inch blades, \$2.50; with 9½ inch blades, \$2.75.



Flower-Holder Shears—Cut and hold roses and other flowers direct from bush without crushing stems. Heavy nickle finish. Each, \$1.50.

The Sensational Multi-Power action gives 60% greater cutting



GRASS SHEARS



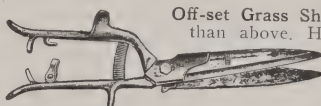
Ezy-Cut Grass Shears—A better made, more durable shear

of the clipper design. Narrow blades, braced and bolted for greater strength. Equipped with adjusting nuts and swinging shackle, permitting blades to be sharpened. 12 inch, \$1.40.



Clean Clipper Grass Shear—The

only full forged grass shear made. Drop forged from cutlery steel, practically unbreakable. Handles definitely offset. The finest grass shear available. 6 inch blades, \$1.65.



Off-set Grass Shear—Heavier than above. Hollow ground

cutlery steel blades. Handle off-set to prevent striking knuckles on walls or pavement. 12½ inch, \$1.65.



Grass Whip—Along handled grass and weed cutter for use on borders and among shrubs. Swing like

a golf club. Made of fine steel, blade sharpened on both edges. Each, \$1.40.

Disston Border Shears

—A nine inch hedge shear mounted on 2-wheel carriage. Handles 36 inches. Makes border trimming easy and rapid. Each, \$4.90.

No. 3 Grass Hook—Small hand scythe with offset handle which prevents bruising hand. Blade of polished steel.



Each, 85c.

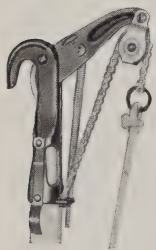
PROFESSIONAL PRUNERS

H. K. Porter Pole Pruners—Porter Pole Pruners were developed to meet the needs of commercial users of such tools for tree trimming on a large scale. These pruners are ruggedly designed to eliminate annoying replacements so common to ordinary tools. Because both blades are sharp, very close cuts are possible, permitting quicker healing. Light in weight, they may be used continuously with minimum fatigue. The round, basswood poles are 15/16 inches in diameter, polished and varnished. This is truly a quality tool. Pole Pruner, complete with one pulley, 10 ft., \$7.45; 12 ft., \$7.65. Head only, \$4.65. Pulley, 25c; Pole, 12 ft., \$1.95; Rope, woven cotton, no center filler, 15 ft., 75c; 100 ft. hank, \$2.50.



Seymour Smith Improved Telephone Pruner Head

—A new and improved design of pruner head with greater cutting power and strength. The greatly improved spring action is revolutionary in design and, combined with the chain pulley unit which eliminates rope wear and breaking, gives unusual easy and quick action. No. 12 cuts 1½ inch branches, \$5.50 each. No. 11, cuts 1 inch branches, \$2.40 each.



Bartlett No. I-W Tree Trimmer

—Embodies the compound lever principle, plus one pulley which makes it an unusually powerful cutting unit. Handles 1½ inches cuts with very little pulling effort. Light weight, head only weighing 1¼ pounds. Complete with 10 ft. octagonal pole, \$7.80; with 12 ft. pole, \$8.20. Four foot pole sections complete, \$2.65 each. Head only, with one pulley, \$4.70.



Home Pole Pruner—Light pole pruner for the small grounds. 8 ft., \$2.30; 10 ft., \$2.50; 12 ft., \$2.75.



Professional Pruner — (Right) Special design for easy cutting. Hardened cutlery blades. Coil spring; full polished; 9 inch, \$4.25.



California Pruner — (Left) Unequaled in medium price pruners. Extra thin hammer forged cutlery steel blades with wide bevel for easier cutting. Coil spring. Full polish finish. 9 inch, \$3.00.



H. K. Porter Forester Point Cut Pruner—A heavy duty pruner of



finest quality, designed to cut large branches in the throat and small branches at the extreme point. The patented Power-Slot multiple leverage principle permits increasing the leverage up to 100 percent by merely slipping the handles into the successive slots.

The two sharp blades cut close and clean and the spur on the hooked blade prevents springing or crossing. This is a tool for hard use and long life and will be appreciated because it is so compact for the power it delivers. 24 inch length, \$5.65; 20 inch length, \$5.50.

Seymour Smith "Super-Cut" Pruner—A light



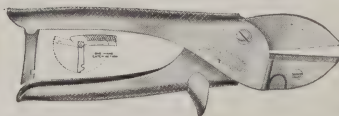
weight, perfectly balanced all-steel pruner that cuts easily and clean, clear to points of cutting blades. So designed that it makes close cuts without stubs, that will heal over quickly. Special alloy steel forgings carefully tempered and ground to keen, lasting cutting edges. Fitted with large, comfortable, hardwood handle grips. Length 26¾ inches overall, weight 3½ pounds. Each, \$4.40.

Multi-Power Pruner—A powerful, clean cutting



heavy duty pruner with the new Multi-Power Com. pound Lever Action which adds 60% more power to the blades: Cutting parts of heat treated alloy steel, all parts replaceable. Capacity 1¼ to 2 inches. Length 31 inches, \$5.00.

Smith Professional—An unusually fine quality one-piece drop forged steel pruner of most approved design. Especially recommended for shrub, orchard and light, fast pruning or for the lady gardener. Preferred by professional men because it is small and light but stands heavy use. Length, 8 inches. Each, \$3.00; 9 inch, \$3.50.



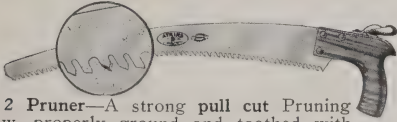
Snap-Cut Hand Pruner

The easiest cutting pruner of its size. A new effortless cutting

action that simplifies pruning. Of finest steel, chromium finish. Length 8 inches, \$2.25; No. 19, lighter weight, enameled finish, \$1.75.

PRUNING SAWS

Speed saws have a new style of tooth which has been responsible for vastly increased speed in cutting green, dry, or soft wood. The teeth are grouped with two slicers and one planer tooth to each section. This tooth design permits fast, easy, and smooth sawing.



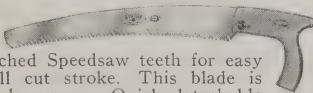
No. 2 Pruner—A strong pull cut Pruning Saw, properly ground and toothed with the right pitch, on curved blade. Pistol grip lacquered beech handle can be used with heavy mittens. Length, 24 inches. With snap—\$4.15; without snap—\$3.75.

No. 2-14 Pruner — Same as the No. 2 except has the popular closed pattern handle. Preferred by utilities and tree surgeons everywhere. Length, 24 inches. With snap—\$4.15; without snap—\$3.75.



No. 3-14 Pruner—Has the proper curve for fast, easy pull cut, speed teeth suitable for large or small limbs. Large closed grip handle of seasoned beech, has plenty of hand room for gloves. Length, 26 inches—\$4.25.

No. 1 All Purpose Saw— Properly pitched Speedsaw teeth for easy and fast pull cut stroke. This blade is used with pole pruner. Quick detachable pistol grip handle. Length, 16 inches. With snap—\$3.15; without snap—\$2.75.



No. 6 Pruner—Has the smallest Speed-saw Teeth in the Pruning Saw line. Cuts exceptionally fast on an easy pull. Point has a 3 inch section of 8 point peg teeth for starting cut. Well shaped, pistol grip. Suggested as best for general use. Length 12 inches, \$2.25.



No. 17 Forester Pruner—Made of genuine Silver Steel, 1½ inches wide at point, 3½ inches wide at butt. Blade is very stiff and will not bind. Extra large peg teeth. New style kiln dried beech handle highly lacquered. Length, 26 inches—\$2.55.



Atkins No. 16 Pole Tree Pruner—Made of genuine Silver Steel fitted with peg teeth. Blade adjustable to cut at any angle. Length, 16 inches. Blade only, \$1.75; complete with Twigger head (see page 13), \$3.00.

Disston No. 111 Pole Tree Pruner—Blade, 9½ inches long, 8 points per inch. Drilled to fit Twigger Pole Saw Head. (see page 13). Blade only, \$1.55.



Atkins No. 41 Pruning Saw—Atkins newest pruning saw. Silver steel. Skew back. Ground 18 x 21 gauge thin back. A six-point hand saw tooth with wide set. Bevel filed. 26 inch length only—\$4.15.



Disston D 27 Pruning Saw—Preferred by expert tree surgeons who prune scientifically. 26 inch cutting edge, 6 points to inch, each, \$4.15.

Disston No. 31 Pruning Saw—Similar to D 27 but only 20 inches long and 7 points to inch. An ideal saw to carry on the belt. Each, \$2.50.



Disston No. 32 Tuttle Tooth Pruner—Made of high grade special steel, tuttle tooth pattern. Has extra sharp teeth that hold their edge longer due to their extra fine temper. Extra large and roomy, kiln dried beech handle. Length, 20 inches—\$2.85; 24 inches—\$3.40.

Atkins No. 40 Tuttle Tooth Pruner—Same as above.



Atkins No. 390 One Man Saw—Has wood saw tuttle teeth, properly filed and set, and is fitted with an extra large and roomy grip beech handle. Length, 2½ feet—\$2.75; 3 feet—\$3.25; 3½ feet—\$3.80; 4 feet—\$4.25.

Disston No. 554 One Man Saw—Same as above.

Atkins No. 540 Silver Steel Cross Cut Saw—For general purpose, including hard wood. Blade 14 x 20 x 16 gauge; extra large tooth and raker gullets enable saw to run fast, free, and easy, without binding in the cut. 5½ ft., \$8.92; 6 ft., \$10.42.



No. 0 Jointer For Pruning Saws. Designed especially for Speed Saws but can be used on all concave, convex, and straight breasted saws by merely adjusting screw. For hand and pruning saws, each, 90c; for cross cut saws, each, \$1.65.

Quick Release Snap—For Roberts Speed Saws and other tools commonly carried on the belt. Each, 40c.



SAW FILES



Atkins Safe Back Cant Saw File—Silver Steel File made of the same high grade material as the Silver Steel Saws. Length, 6 inches—35c; dozen—\$3.95.

Atkins Slim Taper Files—Length, 6 inches, 30c each; dozen, \$3.10.

Disston Extra Slim Tapper File—6 inch, 30c; doz., \$3.10.

Disston No. 38 Special File—(For No. 111 and 16). 6 inch, 50c; doz., \$5.60.

Swan Ratchet Auger Handle



A valuable tool for drilling in close crotches and under limbs, as both handles are removable. Handles of hardwood reinforced with a steel bolt. Steel center. Fifteen inches long. Each, \$4.25.

Swan Auger Handle—Same as above but without ratchet. Both handles removable. Each \$2.00.



Cavity Slicks—Oval and Taper Spoons—Necessary to the proper finishing of cavity fillings. Width, 5/8 inch, 88c; 1 inch, \$1.00; 1 1/4 inch, \$1.20.



Pruning and Budding Knife—Beautiful American made knife of finest quality. Ideal for the professional or amateur gardener. 4 1/8" long. Each, \$2.00; dozen, \$23.00.

Budding Knife—4" length; black celluloid handle. Finest quality. Each, \$1.75; dozen, \$20.50.

GREENLEE TOOLS

Tree Surgeon's Socket Chisels and Socket Gouges

To meet the severe requirements of chisels for tree surgery the blade and socket of these chisels are made from one piece of high grade alloy steel, with the upper section of the blade and the socket being extra heavy. Handle of hickory with turned steel ferrule.

Chisels



1/2 inch, \$2.00. 3/4 inch—\$2.25 1 1/2 inches—\$3.00

Gouges



1/2 inch—\$2.25. 3/4 inch—\$2.50 1 1/2 inches—\$3.25
Extra handles, 25c each

Bit Extensions



The positive lock prevents loosening of the holding sleeve, insuring absolute grip on the shank at all times. These extensions are so designed that they will drive a bit up to 1 inch in diameter and yet follow a 5/8 inch bit.

18 inch, \$2.25; 24 inch, \$2.40; 30 inch, \$2.50.

Tree Rod Bits



Especially designed for tree surgery, these bits are made from very tough alloy material and are heat treated full length for greater strength. The single-spiral twist provides best chip clearance. These bits are perfectly finished and highly polished and should not be confused with poorer quality bits that sell at a lower price.

	12 in. twist	18 in. twist	24 in. twist
	18 in. length	24 in. length	30 in. length
7/16 in.	\$2.75		
9/16 in.	\$6.1	\$2.20	\$2.80
11/16 in.	.091	2.65	3.36
13/16 in.	\$5.15	3.10	3.90

Solid Center Auger Bits

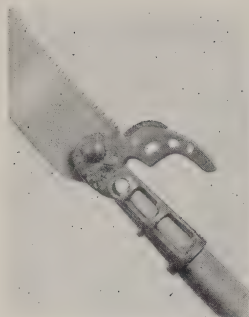


Double cutter head with two extension lips, solid center and single special twist. These bits are perfectly finished, highly polished, and of finest quality.

3/16 inch	40c	5/16 inch	35c
4/16 inch	35c	7/16 inch	40c

THE TWIGGER

The Pole Saw Head that has everything!



A Precision Tool
- - hand finished
Price - \$1.40

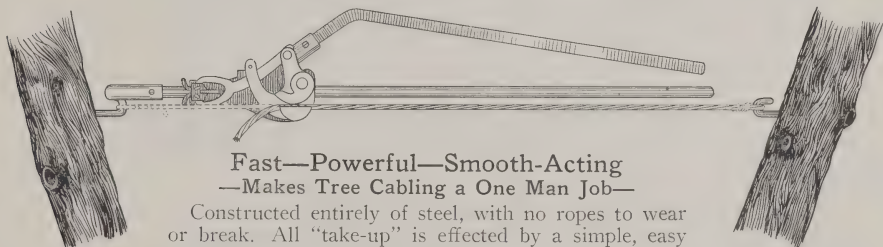
(Specify whether for Atkins
or Diston Saw)

- A large curved hook that really hangs on.
- A small hook to remove twigs and suckers.
- A knife edge to complete the cut and prevent stripping of bark.
- A paint brush holder that works.
- A full size, slim tapered socket for greater strength.
- Malleable iron for strength and durability.

A QUICKER, EASIER UNDERCUT

"A quick forward thrust of the pole just as the branch breaks does the trick"

ROPE AND CABLE PULLER



Fast—Powerful—Smooth—Acting
—Makes Tree Cabling a One Man Job—

Constructed entirely of steel, with no ropes to wear or break. All "take-up" is effected by a simple, easy movement of the lever handle.

For Heavy Pulling Jobs

Grip capacity $\frac{1}{2}$ inch cable. Price, \$14.00 complete.

A PERMALAWN PRODUCT

Announcing Dynamic LIQUI-FEEDER

Feed Lawns, Trees, Shrubs with the garden hose by
Positive, Direct Pressure

The Dynamic Liqui-Feeder does not depend on suction.

**INJECTS PLANT FOOD INTO SOIL FOR TREES AS READILY AS
ON SURFACE FOR LAWNS.**

A PERMALAWN PRODUCT

USE PERMALAWN SOLUBLE PLANT FOOD

Price, complete, \$15.00.

— SAFE-T-SEAT —

MINIMIZES RISK -- ASSURES COMFORT -- SPEEDS UP WORK

Double Safety

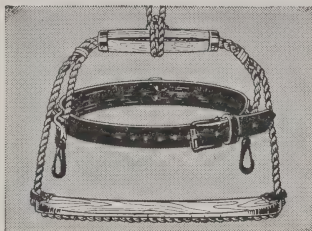
The Safe-T-Seat provides a rope around the waist and a second under the seat, each with an ample safety factor in case the other fails. The safety rope passes through both loops, making a complete system entirely of rope.

Complete Comfort

The Safe-T-Seat can be worn comfortably all day. There are no slings encircling the legs to cut off circulation and no possibility of pinching. The spreader eliminates pressure of the rope against the legs.

Four Sizes

The Safe-T-Seat is made in four sizes:- Small, Medium, Large, and Extra Large. Specify size when ordering.



Construction

The seat and spreader are of special hardwood construction, shaped and finished smoothly. The rope is $\frac{1}{2}$ inch New Bedford Maritime 3 strand Manila and the belt is of highest quality leather, with first grade snaps and buckles, riveted throughout. Weight 3 pounds.

Price \$10.00

Freedom of Movement

The spreader bar prevents binding of the legs, giving complete freedom of movement in any direction. Spreader bar and seat fit closely to the body and do not interfere with climbing or movement among the branches. The balanced support given the body leaves both hands free at all times.

Adjustable

The Safe-T-Seat must fit properly for fullest satisfaction. Move raw hide thongs at the sides toward spreader bar for a looser fit or away to hold seat and spreader snugly to the body.

Parts Replaceable

Any part of the Safe-T-Seat can be replaced if it becomes worn or broken.

PROTECTREE

TREE PAINT

Antiseptic - Fungicidal - Non-injurious

Protectree is an asphalt base paint with special antiseptic and fungicidal properties. It will not injure the cambium tissue and may be painted directly upon it. It is excellent as a cavity paint and for use on wet surfaces.

Penetrating - Quick Drying - Lasting

Protectree penetrates well, dries quickly, and leaves a lasting protective coating; seals pruning cuts and tree wounds and promotes normal healing.

An All Weather Paint

Protectree is treated to prevent freezing, providing an emulsified type paint which can be used in winter as well as in summer.

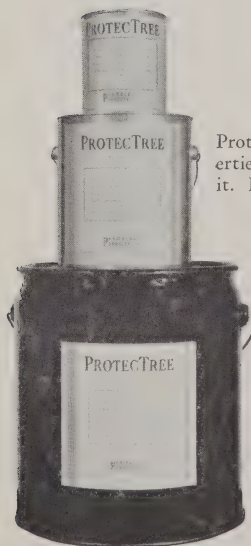
For Small Cavities

Protectree may be used in filling small cavities by mixing it with fine sand to desired consistency. Smooths perfectly and sets quickly.

Dilutable

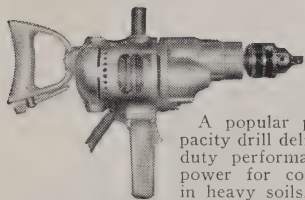
Protectree is of the proper consistency but may be thinned with water if desired.

Prices: quart can, 80c; gallon pail, \$2.35; 5 gallon pail, \$10.00.



ELECTRIC POWER DRILL

3/4 inch Black and Decker



**For Faster —
Easier — More
Economical
Tree Feeding**

A popular priced, large capacity drill delivering real heavy duty performance with ample power for continuous drilling in heavy soils. Ruggedly constructed, with triple gear reduction for low spindle speed and plenty of torque. Motor mounted on ball bearings and chuck spindle on Timken tapered roller bearings. 155 RPM full load; 1 1/2 inch capacity in hardwood, wt., 19 1/4 lbs. Price, complete, \$72.00.

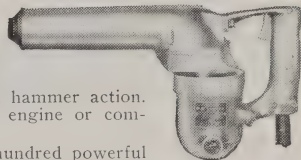
Equipped with soil point this electric hammer provides an excellent means of preparing holes for tree feeding. Complete catalog of hammer tools sent upon request.

For Greatest Efficiency

Equip Your Drill With Ferti-Drill Point

ELECTRIC HAMMER

(Black and Decker)



**Light Weight
Compact**

Speeds up any drilling or cutting operation requiring a hammer action. No bothersome engine or compressor.

Twenty-five hundred powerful blows per minute makes possible faster, easier preparation of cavities. Equipped with soil point this electric hammer provides an excellent means of preparing holes for tree feeding.

Complete catalog of hammer tools sent upon request.

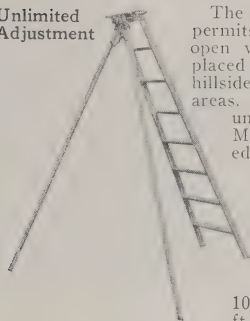
No. 32, weight 9 3/4 lbs., \$115.00.

No. 34, weight 17 lbs., \$145.00.

For More Efficient Tree Surgery

ADJUSTABLE STEP LADDERS

**Unlimited
Adjustment**



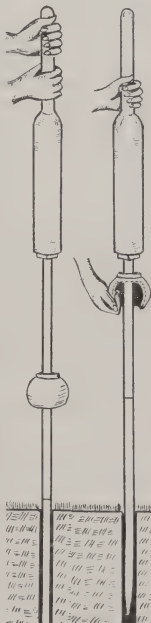
The patented construction permits the back legs to open wide and also to be placed at different levels on hillsides, stony, and uneven areas. Stands level and safe under all conditions. Made of rigidly inspected lumber, each step reinforced with metal drive braces and steel reinforcing rod. Costs no more than ordinary step ladders.

**Specified by
Highway Engineers**

10 ft. length, \$9.00; 12 ft. length, \$12.00.

TREE FEEDERS

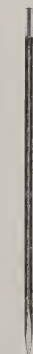
Adams Tree Feeding Bar — A valuable and most effective aid in tree feeding. The handle is a sliding hammer which drives the bar down with great force. In very hard soils a hole can be made with eight to ten strokes. Since the bar does not move up and down in the hole, much less effort and time is required for preparing holes. Price, \$15.00.



← THE FERTI-DRILL

Specially designed soil drill for tree feeding with electric drill. Greatly increases the efficiency of the electric drill. Makes holes more easily, faster, and without mess. Of plow steel, fitted to 5/8 and 3/4 inch chucks. Each, \$4.00.

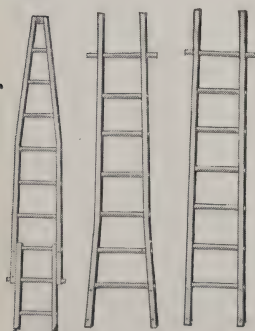
**Equip Your Electric
Drill
with the
Ferti-Drill Point!**



TREE SURGEON'S SECTIONAL LADDER

**Made Especially
for the
Tree Surgeon**

Sides of selected Sitka Spruce, ends reinforced with metal plates and safety bolts. Rungs of second growth hickory, straight grained, smoothly finished. Sections slip together securely and middle sections are interchangeable. Bottom and three middle sections may be used together, top section being optional. 8 ft. sections, \$8.00 each; 10 ft. sections, \$10.00 each.



STRONG — LIGHT — SAFE

GREENLEE SOIL AUGER



Two inch auger bit fitted to 5/8 and 3/4 inch electric drills. 18 inch twist, 30 inches over all length, 3/4 inch shaft. Also available in 5 inch twist with handle for hand drilling. Each, \$3.50.

Permalawn Plant Foods

SCIENTIFICALLY COMPOUNDED

WHAT THEY ARE

Permalawn Plant Foods are carefully prepared in accordance with the best scientific principles and the most advanced methods. Quickly available plant food materials are combined with a vegetable meal to provide hungry plants with both an immediate and a longer lasting supply of food. Soluble iron, manganese, and the other trace elements make Permalawn a complete diet, now in granular form.

FEEDING DEVELOPS FULL BEAUTY

A really fine lawn can be secured only if a scientifically correct feeding program is followed. Such a program enables the grasses to grow vigorously, causing the lawn to become thicker and more beautiful each year. A properly fed lawn becomes green earlier in the spring and remains so later in the fall, giving pleasure for a longer period each year.

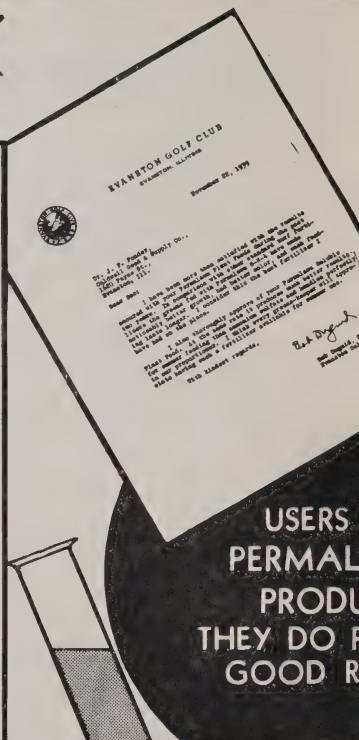
WHEN TO FEED

The lawn grasses usually grow vigorously only from early April to late June and from late August until late October, periods when weather conditions are most favorable. An abundance of plant food should be available during these periods to bring the food supply into balance with the favorable weather conditions.

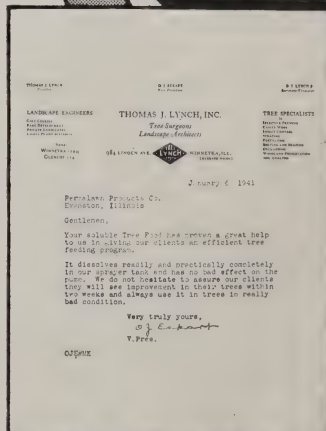
The correct Permalawn Plant Food applied at the beginning of each of these growth periods, in the spring just after the grass starts growth and in the fall after the hottest part of the summer is past, will usually nourish the grass effectively to the end of the growth period. If feeding appears advisable during the summer, Permalawn Soluble Plant Food will be found excellent.

PLANT FOOD BALANCE IMPORTANT

The fertilizer analysis used should be such that it will create the proper balance of plant food elements in the soil. In general, heavy soils require plant food higher in nitrogen than do sandy soils. But even on a heavy soil it is advisable to avoid the use of too high a proportion of nitrogen, which may force the top growth too greatly and produce a weak root system. If in doubt, ask for a soil analysis.

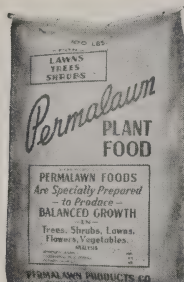


USERS
PERMALAWN
PRODUCTS
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PERMALAWN SUPERIOR
PREFERRED WHERE R

Provide Balanced Diets



LIKE
 LAWN
 ACTS
 PRODUCE
 RESULTS

We believe ordinary fertilizers are worth the price asked for them and that they would be made better but for the extra cost involved. We feel this extra cost is justified in making Permalawn Plant Foods Better.



RESULTS MEAN MOST



Permalawn Plant Food (5-10-6)—5% avail. nitrogen, 10% avail. phos., 6% avail. potash. A complete plant food of moderate balance for general use throughout the garden. Recommended especially for flowers and vegetables, either in the garden or greenhouse, and for lawns on light soils or in shaded, enclosed areas. Apply 30 to 40 pounds per 1000 square feet. 25 lbs., \$1.50; 50 lbs., \$2.50; 100 lbs., \$4.00. 1000 lbs., \$37.50; 2000 lbs., \$70.00.



Permalawn Plant Food (8-8-4)—8% avail. nitrogen, 8% avail. phos., 6% avail. potash. A complete plant food formulated especially for lawns. Recommended particularly for lawns on the heavier soils and in open areas where it produces excellent turf with a strong and vigorous root system. Apply 25 to 35 pounds per 1000 square feet. 25 lbs., \$1.75; 50 lbs., \$2.65; 100 lbs., \$4.25; 1000 lbs., \$40.00; 2000 lbs., \$75.00

TREE FEEDING

"The most important phase of tree care", Missouri Botanical Garden, Bul. No. 4, 1936.

Feeding not only makes trees more beautiful but helps them in their fight against diseases, insects, prolonged periods of drought, and winter injury.

"The only occurrence of winter injury was with trees in extremely low nutritive condition and none occurred with late fertilization". N. C. Exp. Sta. Bul. No. 322.

Trees may be fed at any time during the year and fall feeding is as effective as that done in the spring.

"Fertilizer applied in the fall after the leaves had dropped produced a response in growth approximately equivalent to the same rates of application in March—" N. C. Agri. Exp. Sta. Bul. No. 321.

"Trees require large amounts of food and cannot be overfed". —Missouri Botanical Garden Bul. No. 4, 1936.



Permalawn Tree Food (10-8-6)—10% avail. nitrogen, 8% avail. phos., 6% avail. potash. A complete plant food of the most widely approved analysis specially prepared to feed trees better. Permalawn Tree Food contains sufficient soluble iron, manganese, and the other trace elements to meet the requirements of trees except where bad cases of chlorosis exist, when additional soluble iron should be used. The organic matter in Permalawn Tree Food prevents the formation of the insoluble "plug" characteristic of ordinary tree foods. Allow 4 pounds per inch of diameter of tree trunk for small and medium sized trees and 6 pounds per inch of diameter for larger trees. 50 lbs., \$2.75; 100 lbs., \$4.50; 1000 lbs., \$42.50; 2000 lbs., \$80.00.



Permalawn Soluble Plant Food (18-12-6)—18% avail. nitrogen, 12% avail. phos., 6% avail. potash. A concentrated and completely soluble plant food prepared especially for the liquid feeding of trees, lawns and golf greens. Works perfectly in the power sprayer, Fertigator, or other liquid tree feeding device or through any suitable proportioner. Lawn feeding tests have demonstrated that this plant food is not only quick acting but it is also long lasting. For trees, dissolve 1 lb. per gallon of water and inject into the soil. 100 lbs., \$7.00; 500 lbs., \$34.00; 1000 lbs., \$60.00.

PLANT FOODS

Miscellaneous Fertilizers

Adco—For use in the compost pile to hasten rotting of leaves and other plant materials. 150 pounds makes 4 tons of rotted compost. 7½ lb. bag, \$1.00; 25 lb. bag, \$2.50; 150 lb. bag, \$11.50.

Balanced Plant Ration (5-8-7)—A balanced fertilizer composed chiefly of organic matter and potash which has long been popular in the garden. Use 35 to 40 pounds per 1000 sq. ft. 50 lbs., \$2.75; 100 lbs., \$4.40; 1000 lbs., \$40.00.

Bone Meal—Steamed regular. (2-27-0) 25 lbs., \$1.40; 50 lbs., \$2.35; 100 lbs., \$4.00; 500 lbs., \$18.00.

Bone Meal—Raw. (3¾-20-0) 100 lbs., \$4.50; 500 lbs., \$21.00; 1000 lbs., \$39.00.

Bone Meal—Rose Grower. (3¾-20-0). 100 lbs., \$4.50; 500 lbs., \$21.00; 1000 lbs., \$39.00.

Blood and Bone Meal—(8-20-0) Quicker acting and a better balance than bone meal. Contains 30 percent more nitrogen than ordinary Blood and Bone meal. 100 lbs., \$5.50; 500 lbs., \$26.50; 1000 lbs., \$52.00.

Blood and Bone Tankage—(5½-30BPL) 100 lbs., \$4.50; 500 lbs., \$21.50; 1000 lbs., \$20.50.

Blood Meal—(13½-0-0) Excellent source of organic nitrogen. 100 lbs., \$8.00; 500 lbs., \$38.00.

DAHLIA FERTILIZERS

1. **Permalawn Plant Food** (5-10-6)—Except where tests show an abundance of nitrogen, this plant food will give excellent results. (See pages 24 and 25).

2. **Badger Brand** (0-20-10) (Same as 0-14-7 but more concentrated) — Recommended where soil contains enough nitrogen to produce full sized plants. (Test your soil) 100 lbs., \$4.50.

Ferrous Sulfate—Valuable for acidifying soil and also an important plant food. Better and safer to use than Aluminum Sulfate. 100 lbs., \$4.00; 500 lbs., \$18.75.

Lawn Food—Badger Brand Fairway (6-12-4). A special grade of plant food prepared for the feeding of golf fairways and large lawn areas where economy is essential. 100 lbs., \$3.50; 1000 lbs., \$33.00; 2000 lbs., \$64.00.

Lawn Food—Badger Brand (10-8-6). For golf greens and large lawn areas. This fertilizer is relatively dustless and granular and contains a substantial amount of organic and nitrate nitrogen. 100 lbs., \$3.75; 1000 lbs., \$35.00; 2000 lbs., \$68.00.

Lime—Agricultural (Ground Limestone). Finely divided and most desirable form of lime for correcting acidity. Will not make soil alkaline. 100 lbs., \$1.50; 500 lbs., \$5.00; 2000 lbs., \$15.00.*

Manure—Pulverized cattle. (2-1-1) 100 lbs., \$2.50; 500 lbs., \$12.00; 1000 lbs., \$21.00; 2000 lbs., \$40.00.

Manure—Pulverized sheep. (2-1-2) 100 lbs., \$2.50; 500 lbs., \$12.00; 1000 lbs., \$21.00; 2000 lbs., \$40.00.

Milorganite—Organic material produced from city sewage by the Sewerage Commission of Milwaukee. Contains 6% total nitrogen and 2% phosphoric acid. 100 lbs., \$2.75; 1000 lbs., \$22.00; 2000 lbs., \$43.00.

Muriate of Potash (0-0-50)—50 lbs., \$2.50; 100 lbs., \$3.85; 500 lbs., \$17.50.

Nitrate of Soda (16-0-0)—50 lbs., \$2.50; 100 lbs., \$3.75; 200 lbs., \$7.00.

Peat Moss — Imported. Peat moss is an important aid in better lawn making and should be incorporated in the soil around every newly planted tree and shrub to stimulate root growth. Whenever possible, peat moss should be moistened before incorporation in the soil. 20 bu. bale, \$4.50; 10 bales, \$42.00.

Permalawn—See pages 16 and 17.

Soluble Plant Food—See Permalawn Soluble Plant Food, page 16.

Sulfate of Ammonia (21-0-0)—Important source of quickly available nitrogen. Not recommended except in conjunction with carriers of other elements. 100 lbs., \$3.75; 500 lbs., \$18.00.

Sulfate of Iron—See Ferrous Sulphate this page.

Sulfate of Aluminum—For acidifying soils. Apply 50 lbs. per 1000 sq. ft. and repeat as needed. 100 lbs., \$4.50.

Sulfur—Activated Soil Sulfur for acidifying soils. Oxidizes more quickly than ordinary sulfur. 100 lb. bag, \$6.00.

Superphosphate (0-20-0)—Important source of available phosphorus where economy is a factor. 100 lbs., \$2.75; 500 lbs., \$12.50.

Treble Superphosphate (0-45-0)—Much more concentrated than Superphosphate. 100 lbs., \$5.50.

Tree Food—Permalawn—(see page 17).

Tree Food—Badger Brand (10-8-6). A moderately priced tree food of the conventional 10-8-6 analysis but of an improved formula. 100 lbs., \$4.00; 1000 lbs., \$37.50; 2000 lbs., \$70.00.

Vigoro—100 lbs., \$4.00; 500 lbs., \$20.00; 200 lbs., \$80.00.



Vitamin B1—See page 27.

Prices on fertilizers are subject to market changes and our ability to secure materials and include delivery within 50 miles of Evanston or Chicago except where marked*, to which add delivery charges.

Proper fertilization is the most important single operation that can be performed anywhere in the garden. The soil is a good growth medium only when it contains an adequate supply of plant food materials in a soluble form. Through the years this supply becomes constantly smaller unless it is replenished. This is best done through the application of good fertilizers at proper intervals.

Aids to Better Tree Care

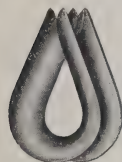
TREE SURGERY SUPPLIES



Double Galvanized Soft Tree Surgeon's Strand.

Seven wire cable of excellent quality made especially for tree surgery. This cable possesses great strength but is soft and pliable for easy splicing and handling. The uniform, double galvanizing gives much greater protection against weather than will be found with single galvanized cable.

Diam.	Per 100 ft.	Per 250 ft.	Per 1000 ft.	Wt. 100 ft.
1/8 in.	\$1.25	\$3.00	\$11.62	6 lbs.
3/16 in.	1.50	3.25	12.75	8 lbs.
1/4 in.	2.10	4.55	17.62	10 lbs.
5/16 in.	3.00	6.60	25.30	15 lbs.
3/8 in.	3.90	8.80	34.50	29 lbs.
1/2 in.	5.97	14.35	55.10	53 lbs.



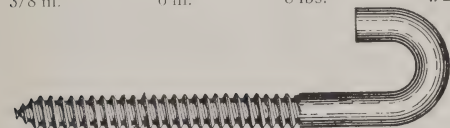
Galvanized Thimbles

Size	One dozen	per 100	Wt. per 100
3/16 in.	\$.66	\$4.85	2.0 lbs.
1/4 in.	.69	5.05	4.0 lbs.
5/16 in.	.90	5.75	5.7 lbs.
3/8 in.	.99	6.60	8.8 lbs.
1/2 in.	1.12	8.80	19 lbs.
5/8 in.	1.75	12.10	



Eye and Eye Turnbuckles

Diameter	Length Inside	Weight	Price
1/4	4 in.	3 lbs.	\$.43
5/16 in.	4 1/2 in.	6 lbs.	.50
3/8 in.	6 in.	8 lbs.	.72



Lag Screw Hooks

Bright Zinc Plated

Special design with long hook stem bent parallel to threaded stem. Clean cut lag threads extending up the stem to line of hook to prevent loosening of cable. The uniform bright zinc plating gives long protection against rust. Made of special alloy steel of unusual strength.

Size	Each	per 100
1/4 in.	\$.085	\$ 5.57
5/16 in.	.10	6.50
3/8 in.	.12	8.50
1/2 in.	.17	12.90
5/8 in.	.20	16.40



Loop nuts—Drop forged, lag screw threaded to fit tree rod. Suggested for heavy cable jobs. For 3/4" rod, 40c each; for 7/8" rod, 45c each.



Tree Rod

Made of special cold finished steel of high tensile strength. Smooth, clean cut lag threads full length gauged to take lag nuts of same size.

Diam.	Wt.	Each	9 Lengths
1/2 in.	6.2	\$1.89	\$14.25
5/8 in.	9.4	2.55	19.00
3/4 in.	13.8	3.15	23.50
7/8 in.	18.5	3.45	26.00

Tree Rod Nuts

Bright Zinc Plated

Clean lag threaded to fit tree rod and lag hooks of same size.

Size	Each	Per 100	Wt. Per 100
1/2 in.	\$.06	\$ 3.75	7.2
5/8 in.	.07	5.25	13.0
3/4 in.	.10	7.50	21.2
7/8 in.	.15	11.25	33.2



Tree Rod Washers

Bright Zinc Plated

Diamond

Size	Per Dozen	Per 100	Wt. Per 100
1/2 in.	\$.45	\$2.61	4.8
5/8 in.	.54	3.39	6.2
3/4 in.	.60	3.75	9.2
7/8 in.	.72	4.11	11.4
	Round		
1/2 in.	\$.15	\$.75	3.8
5/8 in.	.27	1.35	7.7
3/4 in.	.30	1.89	11.0
7/8 in.	.39	2.70	15.5

Blocks

Oval steel blocks with bushed roller bearings and loose side hooks. These blocks are strong, light, and easy to handle among thick branches. For 1/2 inch rope, Single, \$1.25; Double, \$2.25; for 5/8 inch rope, Triple, \$3.50; other sizes available on special order.

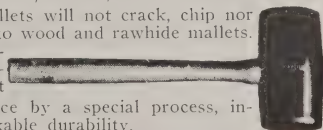


Mallets

Weight	Size	Handle	Price
24 oz.	2-7/8" x 5-1/8"	14"	\$1.90
40 oz.	2-1/2" x 5-1/2"	13"	3.00

Miller Mallets will not crack, chip nor dry out, as do wood and rawhide mallets. Their laminated construction built

into one piece by a special process, insures remarkable durability. Add 10% for Federal Excise Tax on Rubber Goods



Aids to Better Tree Care

TREE SURGERY SUPPLIES

NEW BEDFORD MARITIME MANILA ROPE

NOTICE

By order of the Office of Production Management all manila rope has been withdrawn from civilian use for the duration of the national emergency. As a substitute for manila rope we offer New Bedford pure Sisal rope, which is made with the same care and attention as was given to the manufacture of New Bedford Maritime Manila Rope. We suggest that one fourth larger rope be used than formerly, to compensate for its 25% lower breaking strength.

NEW BEDFORD PURE SISAL ROPE

Per 120 foot lengths: $\frac{1}{2}$ inch, \$2.80; $\frac{5}{8}$ inch, \$4.70; $\frac{3}{4}$ inch, \$5.70, 1 inch, \$9.25.

Prices in 600 and 1200 ft. coils quoted upon request.

All prices subject to change without notice.



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Saxolin crinkled water-proof paper for spiral wrapping of young trees and newly planted smooth barked trees. Prevents sun cracks and entrance of borers. Four inch width, 155 ft. roll, 80c; 10 rolls, \$6.50; 6 inch width, 155 ft. roll, \$1.00; 7 rolls, \$5.90; 8 inch width, 155 ft. roll, \$1.35; 5 rolls, \$6.25.

TREE PAINT

Protectree, see page 14.

Treeseal—Asphalt Emulsion—Thin only with water. 1 gal. pail, \$1.90; 5 gal. pail, \$6.75; 55 gal. drum, \$1.20 per gallon.

Smoothcoat—A specially prepared asphalt paint which produces a smooth and pliant water proof covering. Contains an effective fungicide and does not flow on cut. Thin with linseed oil. 1 gal. pail, \$2.00; 5 gal. pail, \$7.50; 55 gal. drum, \$1.40 per gallon.

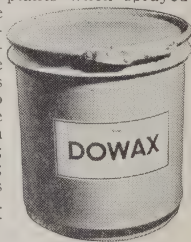
Creosote Wood Preserver—Wood preservative and disinfectant. 1 gal. can, 90c; 5 gal. pail, \$3.70; 30 gal. drum, \$18.00; 55 gal. drum, \$27.50.

TREE SURGEON SHELLAC

(5 pound cut)

A special grade shellac prepared by dissolving five pounds of shellac per gallon instead of four, as is standard for the paint trade. Gives better protection to the exposed cambium layer. 10 oz. bottle, 60c; $\frac{1}{2}$ gal., \$2.50; 1 gal., \$4.60.

Dowax—An antidesiccant which reduces the transpiration of moisture from plants when sprayed on the foliage. Its use on deciduous and evergreen trees and shrubs before storage and at the time of transplanting reduces loss and enables plants to become established more quickly. Dilute 1 gal. with 3 gal. water. 1 gal., \$2.15; 5 gal., \$9.35; 10 gal., \$15.40; 30 gal. drum, \$37.80. Prices F.O.B. Midland, Michigan. Shipping wt., 8 lbs. per gal.



Graftex—An improved grafting compound which requires no heating or fuss. More satisfactory and goes twice as far as old types of wax. Graftex has a definite place in tree surgery in the repair of splits and small cavities. $\frac{1}{2}$ lb., 50c; 5 lbs., \$4.25.

The importance of bringing the faces of a split crotch tightly together to prevent rot and to hasten healing is recognized. While this can be done more effectively than before through the use of the Permalawn Rope and Cable Puller, it is suggested that a perfectly tight and waterproof job can be secured if the edges of each face are coated with Graftex before they are drawn together.

A GOOD TREE EXPERT

"A tree expert should have no secrets in regard to his methods and practices. If he is a real scientific worker he will be glad to share his conclusions with others who are endeavoring to learn the best methods. Home owners welcome the opportunity to learn why certain methods are good practice. The tree expert should be willing to explain his reasons for his recommendations. He will not only describe his methods to his clients but he also will be willing to inform the public." From ARBORIST'S NEWS, January, 1942

SIMPLIFIED INSECT AND DISEASE CONTROL

All prices subject to change without notice and our ability to secure stocks.

In the garden the difference between success and failure frequently depends upon how effectively the many insects and diseases are controlled. There are a number of new and more effective spray materials available which equip the gardener better in this battle than he has ever been before. But equally as important as efficient spray materials is an effective and properly executed spray program.

Spraying should be started early to catch the first insects before they have an opportunity to become established in great numbers. One thorough spraying which catches the first brood in an especially susceptible stage may be many times more effective than several applications later. As an example, the leaf hopper can be controlled most readily in the nymph stage.

HOW TO SELECT INSECTICIDES AND FUNGICIDES

In selecting an insecticide it is necessary to consider the cost of the finished spray of effective strength. Some material may cost very little per pound or gallon compared with another, but because it is weak or dilute it will make so much less effective spray that the cost is much greater than that of the more expensive but more concentrated spray material.

Ant Powder—Kills all kinds of Ants immediately.

Repellent. NON-POISONOUS. Kills both Outdoor and Household Ants. Does not endanger humans, animals, or birds. 6 oz. sifting can, 30c.

Ant Gas—Liquid which forms heavier than air gas fatal to ants. A sure means of control without danger to persons or pets. 8 oz. can, 50c; pint, 90c; quart, \$1.70; gallon, \$6.00.



Arsenate of Lead—Effective and economical control for most chewing insects. Poisonous but longer lasting. 1 lb. carton, 35c; 4 lb. bag, 90c; case of 24 lbs., \$4.85; 96 lbs., \$15.36. Delivered.

Bordeaux Mixture—Effective fungicide for the control of black spot, mildew, leaf spot, etc. One pound makes 5 gallons of spray. 1 lb. canister, 35c; 4 lbs., 95c; case of 24 lbs., \$4.85; 96 lb. case, \$15.36 delivered.

Borerkil—Nicotine paste for killing borers, when injected into their burrows. 1½ oz., tubes, 55c; 4 lb. can, \$7.50.

Carbon Disulfide—Liquid for the control of ants. 1 lb. can, 60c.

Cattle Fly Spray—Mechling's contact and repellent fly spray. Safe and pleasant to use. 1 gal., \$1.30; 5 gal., \$6.00.

Coprote—A combination copper-rottenone dust providing combined disease and insect control. Proven especially effective against leaf hoppers on dahlias, etc. 10 oz. push-pull canister, 45c; 5 lb. bag, \$1.25; 25 lb. bag, \$5.00.

BROWN PATCH CONTROL

CaloClor—Suspension Type—Powder for the prevention and control of both large and small brown patch on lawns. Use at the rate of 3 oz. per 50 gallons of water on 1000 sq. ft. of lawn area. 1 lb., \$4.80; 5 lbs., \$23.50.

Calogreen—Suspension Type—A finely powdered calomel prepared especially for the control of small Brown Patch. Gives prolonged protection with no danger of burning the grass. Use 3 ounces per 50 gallons of water for 1000 square feet. 1 lb., \$5.30; 5 lbs., \$26.00.

Calomel—See Calogreen.

Corrosive Sublimate—U.S.P. bichloride of mercury powder. An effective preventative and control for large brown patch. Valuable for treating bulbs and disinfecting soils to prevent damping off. Use 3 oz. per 1000 sq. ft. 1 lb., \$3.90; 5 lbs., \$18.50.

Cuprocide—Copper dust for treating seeds to prevent damping off. 4 oz., 35c; 1 lb., \$1.00; 5 lbs., \$4.25.

Cuprocide "54"—Prevents Post Emergence Damping Off. Also a good general fungicide. Use 3 lbs. per 100 gallons. 3 lb. bag, \$1.25.

For Roses

Roses are commonly attacked by several fungous diseases which produce mildew, leaf spot, etc. A **non-staining** and effective control may be secured economically with **Copper Solution**. Should be used in combination with Pyrote if insects are to be controlled.



Copper Solution—(Active agent in numerous rose fungicides). A complete solution of copper which permits effective control of fungous diseases on roses, phlox, delphiniums, chrysanthemums, sweet peas, and many others, at a reduced cost. Stimulates plant growth, producing better flowers and vegetables. Non-staining. 1 gallon makes 100 gallons. 1 qt., \$1.70; 1 gal., \$5.00.

Cyanogas A—Dust fumigant for the control of ants, moles, and other burrowing insects and animals. 4 oz. tin, 30c; ½ lb. tin, 45c; 1 lb., 75c; 5 lbs., \$3.00; 25 lbs., \$10.00.

Cyanogas G—Greenhouse fumigant for the control of aphid, white fly, thrip, and other greenhouse pests. Also used to control burrowing rodents. 5 lbs., \$3.00; 25 lbs., \$10.00.

Dorm-Spray Scale Oil—The dormant oils have become universally accepted as best for scale control when applied during the dormant period. Dorm-Spray Scale Oil is an exceptionally effective dormant oil of highest quality. 1 gallon makes 15 to 25 gallons effective spray. 1 gal., \$1.25; 5 gals., \$5.00; 15 gals., \$11.00; 30 gals., \$17.50; 52 gals., \$21.50.

Filmfast Spreader and Sticker—A good spreader and sticker should be used with all powder types of spray materials, such as lead arsenate, Bordeaux Mixture, Copper "34", and sulfur to secure better spreading and better adherence of the material to fruit and foliage. The Arnold Arboretum has pronounced it the best spreader and sticker available and it has been found essential to the control of CEDAR-APPLE RUST through the use of sulfur. Use 2 pounds per 100 gallons. 2 lb. bag, 75c; 25 lbs., \$6.25; 100 lbs., \$20.00. (Cost per gallon of prepared spray 1c).



Fly and Mosquito Spray—1 qt., 50c; 1 gal., \$1.50.

Larvacide—Soil fumigant which destroys worms, larve of various insects, disease fungi, and weed seeds in greenhouse and garden soils. One pound treats 100 to 200 square feet of soil. In one pound injector bottles, \$2.00 per pound.

Lethane 440—A general insecticide recommended especially for the control of the scale insects on shade trees upon which oil cannot be used; also as a summer scalecide for evergreens, hard maples and other shade trees and to be mixed with the dormant oils for late dormant spraying where usual oil concentrations would not be safe. An excellent control for red spider mites, mealy bugs, and other hard to control insects. 1 qt., \$2.25; 1 gal., \$6.00; 5 gal., \$27.50.

Lime Sulfur—(Dry)—Dormant spray for the control of scale insects; 3 lbs. to 12 gallons of water. 1 lb., 35c; 5 lbs., \$1.50; 25 lbs., \$4.50; 100 lbs., \$12.50. (*3c).

Lime Sulfur Solution—Dormant spray for scale insects. 1 gallon to 12 gallons of water. Discolors paint and is less popular than dormant oil. 1 qt., 50c; 1 gal., \$1.35; 5 gals., \$4.50.

Naphthalene Flakes—5 lbs., \$1.40; 25 lbs., \$6.00.

Nicoteen Powder—Greenhouse fumigant which lights quickly and burns completely. 5 lb. tin, \$4.00; 10 lb. tin, \$7.00.

Nicotine Sulfate—Effective control for certain soft bodied sucking insects. 1 oz., 36c; 5 oz., \$1.05; 1 lb., \$2.50; 5 lb. can, \$6.90; 10 lb. can, \$13.70. (*1½c).

Nico-Fume Liquid—For fumigating or spraying. 1 lb. can, \$2.50; 4 lb. can, \$6.50; 8 lb. can, \$12.00. (*1½c).

Paris Green—1 lb., 55c; 5 lbs., \$2.50.

Paradichlorobenzene—Fumigant for the control of Peach Tree Borer and common house moths. Suggested to Tree Surgeons for use in cavities as a precaution against the entrance of borers. 1 lb. can, 50c; 5 lb. can, \$2.00.

Pernacide—Concentrated pyrethrum-rottenone spray of finest quality. An excellent general purpose spray where quick control is essential. Recommended especially for shade trees and shrubs, but is equally effective in greenhouse and garden. One gallon makes 400-800 gallons spray effective against many sucking and chewing insects. 1 qt., \$3.75; 1 gal., \$13.50; 5 gal., \$65.00.

Pomogreen—(With Nicotine)—Poisonous. 1 lb., 75c; 5 lbs., \$3.00. (*16c).

Red Spider and Cyclamen Mites and other Mites

"Rotenone appears at present to be the most promising spray material to try against the pallid (Cyclamen) mite and is effective also against aphids, thrips, and red spider mite. Since finely ground sulfur is also effective against exposed mites, better results may be secured by either combining a wettable sulfur with the rotenone spray or following each spray treatment with a light dusting of dusting sulfur."—Delphinium Society Year Book, 1939.

Pyrote—An excellent general purpose spray. Pyrote combines the killing power of both pyrethrum and rotenone and is thus effective against a greater number of both sucking and chewing insects. If a thorough spray program is started early, when the plants are young, the effective control of the most common insects may be expected. Pyrote is non-poisonous to humans and pets, and will not injure the tenderest foliage, does not discolor, contains its own spreader, mixes easily, and is economical. It is equally effective in the greenhouse, in the flower and vegetable gardens, on shrubs, and for fruit and shade trees. It is an excellent substitute for nicotine sulfate and has an important place in park and grounds maintenance. 1 oz., 35c; 5 oz., \$1.00; pt., \$2.50; gal., \$15.00.



Rotenone "75"—Non-poisonous dust effective against many sucking and chewing insects. Specific for the pea aphid and recommended for thrip on gladiolus. 1 lb., 30c; 5 lbs., \$1.00.

Rotenone "400"—Concentrated, non-poisonous spray. Contains 4% rotenone. Effective against red spider and other mites, thrip, and many other sucking and chewing insects, especially those attacking vegetables and flowers. Use 6 oz. per 35 gallons water, 6 oz., 50c; 4 lb. bag, \$1.80.



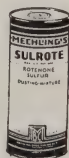
Selocide—Specific control for red spider, 1 gal., \$4.00; 5 gal., \$16.75.

Semesan—Semesan, Special—Control for brown patch. Use ½ lb. per 1000 sq. ft. 1 lb., \$2.25; 5 lbs., \$7.80; 25 lbs., \$36.00; 100 lbs., \$135.00.

Slug Shot Powder—Long a popular dust for the control of insects on vegetables, especially cabbage, cauliflower, cucumber, etc. 1 lb. carton, 25c; 5 lb. carton, \$1.00.

Spor-go—Special copper spray which contains its own spreader and sticker. Excellent and economical fungicide for use on trees, shrubs, flowers, etc. Use 1 pound to 20 to 40 gallons water. 8 oz. canister, 50c; 5 lb. bag, \$3.00.

SULROTE—Combination Fungicide and Insecticide. Sulrote is a combination sulfur and rotenone dust for use in the garden where dusting is preferred to spraying. It is an excellent control for leaf spot, mildew, and chewing insects on roses and lilacs, is especially recommended for the control of Thrip on iris, gladioli, and peony, and for Alternaria of carnation, and if used at proper intervals will control Red Spider and Cyclamen Mite. 10 oz. push-pull canister, 50c; 1 lb. canister, 50c; 5 lbs., \$1.25; 25 lbs., \$4.25.



Magnetic Sulfur-Rotenone Spray—A superior fungicide and insecticide consisting of finely divided sulfur and rotenone. Effective as either a dust or a spray. Recommended especially for the control of red spider, cyclamen mite, thrips, etc., and for mildew and leaf spot on roses. Contains 55 percent sulfur and 1.50 percent rotenone. 4 lb. bag, \$1.25; case of 24 lbs., \$6.45.

Fungous Diseases

Fungous diseases attack many of the common garden plants and produce more or less severe damage. All such plants will be more vigorous if sprayed occasionally with a good fungicide. Either the copper or sulfur compounds are effective controls.

SprayCOP—A very welcome substitute for Bordeaux Mixture. SprayCOP contains nearly 3 times as much copper as Bordeaux Mixture and may be substituted for it at one third the rate with superior results. SprayCOP mixes in the spray tank with greater ease, contains no free lime and may be combined with any other spray materials, does not discolor foliage as much as Bordeaux Mixture, has a wider margin of safety. One pound makes 20 gallons spray. 6 lb. bag, \$1.80; case of 48 lbs., \$12.24. (Cost per gallon prepared spray— $\frac{3}{4}$ c).



Sulfur—(Wettable)—Effective general fungicide for most fungous diseases encountered in the garden. Wets immediately upon addition to water and is easier and more pleasant to use than a dust. Very effective control for **Red Spider**. Use 4-5 lbs. to 100 gallons water, or as a dust 2 lbs., 35c; 5 lbs., 55c; 24 lbs., \$2.50.



Sulfur—Super Adhesive Dusting. 100 lb. bag, \$6.80.

Magnetic Dusting Sulfur—A finely divided sulfur with great adhesive properties prepared especially for dusting plants for disease and red spider and mite control. 3 lb. canister, 50c.

CEDAR-APPLE RUST SPRAY SCHEDULE

Hawthorns and Crab-apples—(spray only in spring)

Apply first spray as leaves are emerging from buds. Apply four or more sprays at 8 to 10 day intervals as long as galls on Red Cedar produce gelatinous material following a rain. Spraying just preceding or immediately following a rain is most effective.

Red-Cedars—(Spray only in fall)

Apply first spray about August first or when sparse stalks develop on under side of leaves of hawthorns and crab-apples. Follow with 2 or 3 sprays at intervals of 2 or 3 weeks as long as spores are being produced by hawthorns and crab-apples.

Linco Colloidal Sulfur—A very finely divided sulfur. Linco-Colloidal Sulfur is the most satisfactory control for **Cedar-Apple Rust**. When used in conjunction with **Filmfast** it has given a high degree of control of this disease on ornamental hawthorns and crab-apples and on red cedars. Linco-Colloidal Sulfur is also an excellent **General Fungicide** for use throughout the garden and furnishes a most effective and economical control for **Red Spider** and **Red Mite**. Use 6 pounds per 100 gallons. 1 pint, \$1.00; qt., \$1.50; 12 lb. kit, \$3.60; 25 lb. kit, \$6.75; 60 lb. kit, \$15.00. (Cost per gallon of prepared spray—1c).

Snarol—An insecticide bait to combat snails, cut worms, sow bugs and grasshoppers. Price, 1½ lb., 35c; 4 lbs., 85c; 15 lbs., \$3.00; 50 lbs., \$8.00.



SUPERIOR SCALE OIL—A better dormant oil. Superior Scale oil is a carefully compounded, highly refined oil for the control of the scale insects which commonly infest orchard, shade, and evergreen trees, and ornamental shrubs. To make it a more complete control for insects during the dormant period it contains **creylic acid** in the amount recommended by experiment sta-

tions to destroy the APHIS EGGS usually present on these during the winter. One gallon makes 15-20 gallons. 1 qt., 75c; 1 gal., \$1.75; 5 gals., \$5.50; 15 gals., \$12.00.

Medol Summer Scale Oil—1 qt., 75c; 1 gal., \$2.00; 5 gals., \$5.50.

Tartar Emetic—Recommended for the control of thrip on gladiolus. ¼ lb., 35c; ½ lb., 60c; 1 lb., \$1.00. Use ¼ lb. Tartar Emetic, 1 lb. brown sugar, 6 gals. water.

Tobacco Dust—5 lb. bag, 50c; 50 lb. bag, \$4.00. Nicotine content 1%.

Tree Tanglefoot—Checks attacks of insects which crawl up the trunks to feed upon the leaves. Effective against White Marked Tussock Moth and Spring Canker Worms if trees are banded in late winter. 1 lb., 80c; 5 lbs., \$3.75; 10 lbs., \$7.00; 25 lbs., \$15.00.



Tree Tanglefoot Bands—Balsam wool bands 3 in. wide. Place bands around tree, smooth side out, and spread Tanglefoot on bands. Soft wool fills crevices in bark, completing insect barrier. Easy to remove after period of insect attack is past. Price, Roll, 16½ ft., 40c; log of 12 rolls, \$3.50.

Trio-gen—Gives protection against numerous diseases and insects on roses. Set consists of solutions Nos. 1, 2, 3. "A" kit for 4 gals., \$1.50; "B" kit for 16 gals., \$4.00; "C" kit for 32 gals., \$6.00; "D" Estate kit for 128 gals., \$20.00. (*16c).

Volk—Greenhouse: Light oil spray effective against numerous chewing and sucking insects. 1 qt., 80c; 1 gal., \$2.50.

Volk—Nursery: A contact spray for use in the nursery and garden. 1 qt., 80c; 1 gal., \$2.50.

DILUTION TABLE FOR HOME GARDENS

Powder Spray Materials

1 lb. per 100 gallons water

equals about

1 oz. per 6 gallons water

equals about

1 level tablespoon per gallon

Fluid Spray Materials

1 gallon per 100 gallons water

equals about

4 fluid ounces per 3 gal. water

equals about

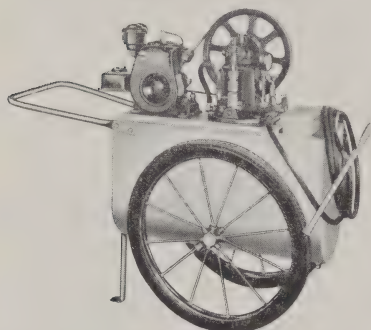
3 tablespoons per gallon water

"Effective Spray Equipment"

SPRAY-RITE POWER SPRAYERS

For Better Insect and Disease Control

HIGH PRESSURE
GIVES BEST CONTROL



SPRAY-RITE No. 25G

Replace old, inefficient hand sprayers and compressed air sprayers with one of these compact, easy to handle, efficient, low priced power sprayers.

—SPECIFICATIONS—

Spray-Rite No. 25G—18½ inches overall width, 25 gallon rust proofed steel tank, 1½ gallon per minute discharge at 250 pounds pressure, 25 ft. 3/8 inch high pressure hose, adjustable spray gun No. 3194.

With ⅔ H.P. Briggs & Stratton engine, 26 x 2¼ inch pneumatic tires, **\$133.50** delivered.

With ⅓ H.P. Electric Motor, 26 x 2¼ inch pneumatic tires, **\$125.00** delivered.

Spray-Rite No. 225G—Same as above but with 50 gallon tank and 5.50 x 16 inch pneumatic tires, **\$165.50** delivered.

For Flowers, Shrubs, Evergreens, Small Trees

THE PARK SPECIAL

SPRAY-RITE No. 50G

The most efficient, large capacity, portable power sprayer ever offered at this price.

Economical of man-time and materials.

—SPECIFICATIONS—

Fifty gallon rust proofed steel tank. Double cylinder pump, 3 gallons per minute at 300 pounds pressure, 1¾ H.P. Briggs & Stratton engine, disc wheels with roller bearings, 5.50 x 16 inch pneumatic tires, 25 ft. ½ inch high pressure hose, adjustable spray gun No. 3198.

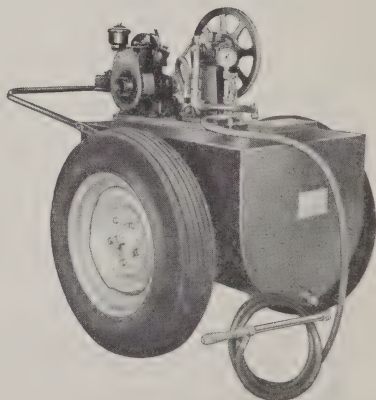
Price, **\$230.50** delivered

Pump only, \$76.00

Above with 4 gallon per minute pump, \$244.50 delivered.

Trailer Hitch extra for above, \$18.00.

For Shrubs, Evergreens, Moderate Sized Trees

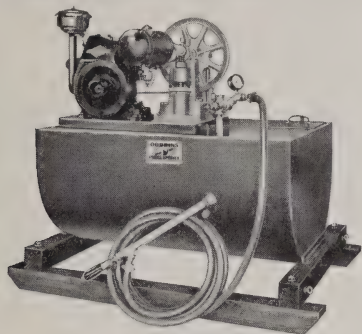


EVERY PARK, ESTATE,
CEMETERY NEEDS ONE

SPRAY-RITE PORTABLE SPRAYERS

For Pick-up Truck or Trailer.

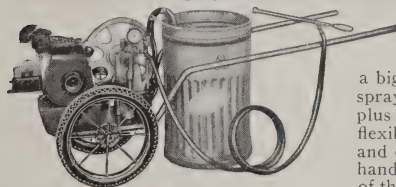
A very practical line of light weight, high pressure spray outfits for the small orchard, nursery, park, estate, and commercial man.



	Tank		Discharge		
No.	Cap.	Power	Per Minute	Pressure	Prices
3264	50 gal.	1 3/4 H.P.	3 gallons	300 lbs.	\$167.75
3265	100 gal.	1 3/4 H.P.	3 gallons	300 lbs.	187.50
3266	100 gal.	2 3/4 H.P.	4 gallons	350 lbs.	218.75
3267	200 gal.	5 H.P.	6 1/2 gallons	400 lbs.	290.50

SPRAY-RITE WHEELBARROW SPRAYER

A genuine power sprayer with all the features of



a big sprayer plus the flexibility and easy handling of the wheel-

barrow type. This is not merely a wheelbarrow sprayer with a motor attached, but a small power sprayer with conventional pump unit with ample capacity for spraying evergreens and small shade trees and lawns for brown patch control. **Fully equipped for spraying.**

SPECIFICATIONS

Capacity, 1 1/2 gallons per minute at 250 lbs. pressure; 18 gallon galvanized steel tank, 2 x 16 inch pneumatic tires, 25 ft. 3/8 inch high pressure hose, adjustable spray gun No. 3194.

With 1/2 H.P. Briggs and Stratton Engine, \$97.50.

With 1/4 H.P. A.C. Motor, \$90.50.

Pump unit only, \$39.50.

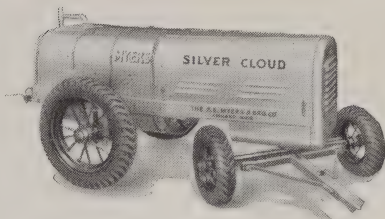


BRASS HOSE COUPLINGS AND CLAMPS

High pressure connections for 1/2" and 3/4" hose. Can't pull out or slip off.

Clamps, 40c each; couplings: 1/2" male, 30c; 1/2" female, 50c; 3/4" male, \$1.20; 3/4" female, \$1.30.

HEAVY DUTY SPRAYERS



Myers Silver Cloud Sprayers

Meet the demands and have the stamina required for spraying shade and ornamental trees in municipalities, cemeteries, parks, institutional grounds, and estates.

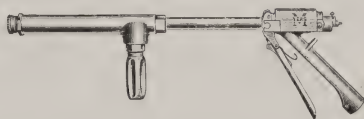
The famous Myers Self-Oiling Bulldozer Triplex Spray Pumps, which are standard equipment on these sprayers, are capable of maintaining extremely high pressures, through long leads of hose when necessary, for delivering the spray to the tops of high trees.

Pump capacities from 5 gallons per minute to 35 gallons per minute. Available in wheel, skid, and trailer models, from \$272.00 up.

Complete catalog sent upon request.

SPRAY GUNS

Myers Silver Spray Power Gun



A large capacity high pressure gun of greatly improved design. The combination of the pistol grip opening nozzle and the forward adjusting nozzle afford a natural position for holding, pointing, and carrying the gun. Price, \$14.75; with high pressure ball bearing swivel \$18.00; swivel only, \$4.75.

Myers Power Gun



No. 3198—Standard size gun for commercial and larger estate sprayers. Of heavy material throughout and adjustable from fine mist to strong stream. Each, \$8.50; with swivel, \$10.10.

No. 3194—A small size, light spray gun designed for use with all small power sprayers. Delivers a wide variety of sprays by a slight turn of the handle. For 3/8 or 1/2 inch hose.

HAND SPRAYERS AND DUSTERS

Spraymore—Knap-sack type continuous sprayer in which pressure is easily maintained by operator while spraying. Capacity, 4 gallon, full open top, automatic shut-off,

and adjustable angle fog nozzle. Galvanized, \$16.50; Copper, \$28.00.



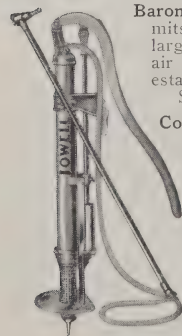
BigHead Sprayer—Capacity 4 gallons. Full open top with safe, easy operation sealing unit. Easier to pump and tested to several times operating pressure. Has many superior features not found in other sprayers. Galvanized tank, \$7.20; Copper tank, \$15.20.

Fun-L-Fill Sprayer—Capacity 3½ gallons. Perfectly safe, easy operating sealing unit; easy to operate,

large capacity pump. Tank electrically welded throughout. Galvanized tank, \$4.40.

Fun-L-Fill Junior—Same as above but 2 gallon capacity. Galvanized tank, \$3.75.

Jumbo—Hand spray, 3 qt. Continuous action, two way nozzle. Patented plunger which always works. Strongly built. Galvanized, \$1.75.



Baron Bucket Pump Sprayer—Permits higher pressure spraying and larger volume than compressed air sprayers. Very practical for estates. Equipped with agitator. See at left, \$7.50.

Copper extension rods to fit all above sprayers—4 ft., \$1.50; 2 ft., 80c.

Pennant Automatic Shut-off, without nozzle, \$1.50.

Adjustable Nozzle, can be changed to any angle, \$1.50.

Hose—3/8" Red Corrugated, inner liner spray proofed; 250 lbs. working pressure. Per ft., 20c; 25 ft., \$4.00.

CONTROL WEEDS BY BURNING

Lowell Flame Sprayer—A compact, light flame sprayer that develops 2000° F. with 12 inch, flat flame. Burns weeds, seeds, rubbish, etc. Useful for thawing out pipes, melting lead, asphalt, roofing, and the like. Tank, 4 gal. capacity, hose treated to resist oil. Price, complete, \$16.50.

Has been effective in controlling crab grass if used at the time the seed was maturing and before it shatters.



TROMBONE SPRAYER

Trombone Sprayer—The trombone type of sprayer

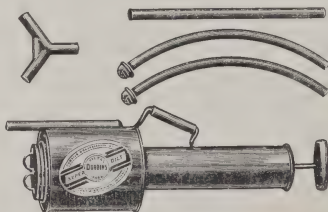


delivers a fine spray at up to 100 pounds pressure as soon as pumping is started.

Works in buckets, barrels, tanks, lakes, or streams. Handles any spray solution. Each, \$5.40.

ADJUSTABLE DUSTERS

Adjustable Senior—A large capacity new type duster with adjustable discharge equipment. Develops the most perfect dust cloud with the greatest ease of operation of any duster on the market. For gardens, small trees, shrubs. Capacity, 3 lbs., each, \$3.00.



Adjustable Junior—A small hand duster is valuable in any garden. One pound capacity, special discharge cap spreads dust stream and is quickly adjustable to dust under leaves. Each, \$1.25.



CRAB GRASS CONTROL

Crab grass, the greatest menace to a beautiful lawn today, can be controlled and no home owner can afford to ignore its inroads or to neglect the necessary control measures. These mean added work and added expense but they are necessary to a beautiful lawn.

IN GENERAL

Some attention to crab grass control will be necessary in every lawn. Crab grass seed germinates only in hot weather—watch for crab grass after the first "hot spell" of the season. Crab grass does not grow in shaded areas; sprinkling does not introduce crab grass but shallow sprinkling encourages its development. Crab grass seed is never present in lawn seed—even low quality; it is generally introduced in top dressing soils and animal manures. High winds and birds are general sources of infestation. A well fed, vigorous lawn clipped high ($1\frac{1}{4}$ to $1\frac{1}{2}$ inches) throughout the season fights crab grass better.

Any control program must prevent the production of mature seeds—crab grass is an annual:

Program 1. Where lawn is relatively free of crab grass, pull or dig individual plants while young. In digging, cut immediately below the crowns as it is not necessary to remove fibrous roots. Do not allow a single plant to go to seed.

Program 2. Where infestation is so heavy that digging is impractical, use the "raking and clipping" method to prevent all seed production. Cut grass high except when "raking and clipping".

Program 3. Where infestation is very heavy and "raking and clipping" is not practical, use chemical control methods before seed heads appear. If several applications are necessary the final treatment must be given before seeds mature.

CONTROL LAWN WEEDS

Zotox Weed Killer

A proven arsenical spray which controls crab grass, dandelions, plantain, chickweed, and other lawn pests with minimum damage to grass. One pound treats 1000 to 2000 square feet. 8 oz., \$1.00; 1 lb., \$1.50; 2 lbs., \$2.50; 5 lbs., \$4.50.

Purfect—Chickweed Eliminator. One gallon will treat about 2500 sq. ft. Gallon, \$2.00; 5 gal., \$8.00.

Sodium Arsenite—Effective control for lawn weeds when used in proper dosages. 1 lb., 50c; 5 lbs., \$1.50; 10 lbs., \$2.75.

Sodium Chlorate—For crab grass control. Instructions sent with order. Specify area involved. 1 lb., 50c; 5 lbs., \$1.50; 10 lbs., \$2.75.



Dandelion Killer—Two or three drops applied to the crown of dandelions, plantain, buckhorn, and other rosette type lawn weeds offers a quick and easy way of eliminating these lawn pests. 1 qt., 50c; 1 gal., \$1.50; 5 gal., \$6.25.

WEED KILLERS

Atlacide—For the destruction of all weeds and grass in drives and tennis courts. 5 lbs., \$1.50; 15 lbs. (for 1500 sq. ft.), \$2.75; 50 lbs., \$7.00; 100 lbs., \$12.50. (cost per 1000 sq. ft., \$1.80).

Herbicide—Destroys ordinary grass and weeds; dilute one gallon to 40 or 50 gallons of water and apply on 2500 sq. ft. Qt. can, 50c; gal. can, \$1.50; 5 gal. can, \$6.00.



Meo 181—New weed killer for dandelions, plantain, and other broad leaved plants. Turns grass brown for 4 to 6 weeks. Use 5 gals. per 1000 sq. ft. 1 gal., \$1.55; 5 gals., \$7.25. (cost per 1000 sq. ft., \$7.25).

FOR TENNIS COURTS

Calcium Chloride—Dowflake is an unusually pure grade of calcium chloride and is recommended for settling dust of drives, tennis courts, etc. Keeps weeds under control and melts ice and snow in the winter time. Improves cement mixtures. Packed in water proof bags; 100 lbs., \$2.75.

ANIMAL REPELLENTS



Dogskat — Repellent for dogs and cats when sprayed under and around shrubs and evergreens. Non-poisonous.

DOGSKAT

Dog Skat (liquid spray)—Stops dog injury to lawns, Evergreens, trees. Bottle, 35c.

Dog Skat (tubes)—Keeps dogs away from trees. Hang in Evergreen clumps. Each, 25c.

Repellent Paint—Protects crocus, tulips, seeds against gophers, squirrels, rabbits, and mice. May be sprayed on base of tree trunks to prevent winter rodent injury. 1 qt., \$1.75; 1 gal., \$3.50.

PLANT HORMONES AND VITAMINS, ETC.

Re-Root No. 1—Hormone-Vitamine treatment for the more sensitive plants. 2 oz., 75c; 1 lb., \$5.00.

Re-Root No. 2—For more hardy, woody plants. $1\frac{1}{2}$ oz., \$1.00; $\frac{1}{2}$ lb., \$4.00.

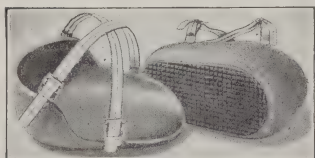
Vitamin B₁ Pellets Plus—Vitamin B₁ plus 4 other vitamin growth factors proven beneficial to plants. Now in pellet form to fit B₁ vitaminizer below. 100 pellets, (1 mgm. Vitamin B₁) and Shake-A-Drop bottle, \$1.00.

Floralife—Food for cut flowers. Makes flowers last 3 to 5 days longer. Pkt., 10c; Family pkt., \$1.00; Commercial pkt., \$2.50.

Waterwand—Water flowers, rose bushes, etc., without wetting the foliage. The Waterwand is a valuable aid in watering plants in benches and borders. Water roses without scratching hands and reach difficult places. Waterwand releases water in a steady, gentle flow at base of plants. 52 inches long. Each, \$2.50.



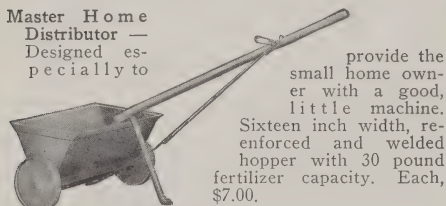
Eezy Wear Gloves—Made of imported leather, soft, comfortable, sift proof; washable and durable. Ladies' sizes, "small", "medium", "large". Men's sizes "medium" and "large". Pair, 75c.



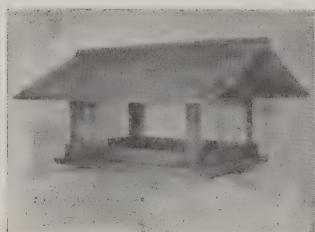
Rubber Knee Pads. Made of solid and soft sponge rubber. Protect the knees against moisture and out wear several pairs of leather pads.

Adjustable straps prevent slipping down while walking. Pair, \$1.65.

Master Home Distributor — Designed especially to



Wild Bird Feeding Shelters—Well built and attractive. 20% discount from price shown. No. FS21 Double Weather vane. Stained

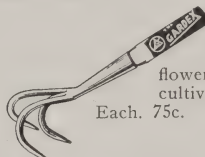


brown, \$5.00 Same but with glass back, \$7.50. No. FS22 Stationary type, \$5.00. No. 4 Robin Roost—nesting shelter for Robins. Stained brown. \$1.25



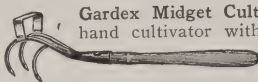
Diamond Point Hoe —The perfect push hoe. Has many other uses and permits

much more rapid and easier weeding and cultivation close to plants. Easy to use in beds and shrubs. Each \$1.75.



Gardex Cultivator, 3 prong. A most efficient cultivator tool for the flower bed and border. Makes cultivation of shrubbery easy.

Each. 75c.



Gardex Midget Cultivator. An excellent hand cultivator with narrow weeder attachment. Each, 40c.

GARDEX SOIL FLOW TOOLS

7 Tool Cultivator. An effective new type cultivator which can be changed from 5 to 1 prong by loosening wing screw and removing prongs not needed. Seven combinations possible. No wrench needed and no bolts to loosen. Price, complete, \$1.50.

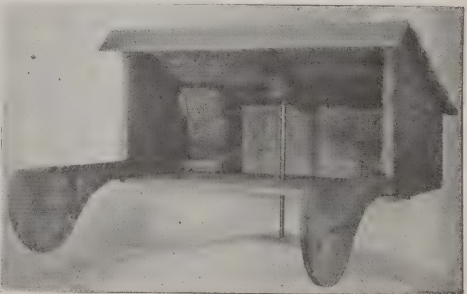


Garden Pull Hoe —V shaped blade; penetrates easily, weeding and cultivating in one operation. Leaves soil level. Much easier than the chopping type of hoe. Complete, \$1.25.



Asparagus Knife — Excellent

for digging dandelions and other weeds. 16 inch length, 50c.



MISCELLANEOUS SUPPLIES

Colored Raffia—Best quality imported raffia dyed green to blend with plants. Strong and durable, it is the best material to use for tying plants to stakes or supports. Easily clipped at end of season. 2 oz. bunch, 40c; 1 lb., \$1.30.

Plain Raffia—Best grade of imported raffia in natural color. Strong and durable plant ties. 1 lb., 95c.

Twine—Soft, strong, 2 ply twine dyed green. Best for tying dahlias and other plants. ½ lb. ball, 35c.



'TWIST-EMS'—Dark green strong tapes with wire reinforcing that make perfect plant ties. Packed in boxes to be carried in the pocket. No tying, no knots. 8 inch, box of 125, 25c; 4 inch, box of 250, 25c.

Plant Markers, Brandt's All

Metal—Made of special zinc alloy which will not rust or corrode. Special writing fluid makes permanent marker. B-200 writing fluid, 15c; B-201 label and holder, 3 for 10c; B-202 large holder, 5c each; B-203 small holder, 3 for 10c; B-204 small insert, 8 for 5c; B-205 large insert, 6 for 5c; B-206 small wired tag, 4 for 5c; B-207 large wired tag, 3 for 5c; B-208 special pen point, 5c; B-209 special pen holder, 5c.

Hotkaps—

To protect young plants from frost and trans-



plants from drying out. **Home Package**, includes 100 Hotkaps, Setter, and Tamper, \$2.85; **Trial Package**, includes 250 Hotkaps, Setter and Tampere, \$4.25; 1000 Hotkaps, \$10.25.

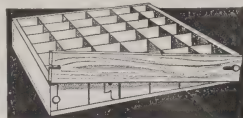
Plant Stakes—Bamboo, painted green, per 100, 2 ft., \$1.40; 3 ft., \$1.75; 4 ft., \$2.25; 5 ft., natural heavy tonkin, doz., \$2.00; 6 ft. Dahlia stakes of California Redwood, 1¼" square, rounded corners, durable, long lasting, natural color, doz., \$2.00; 100, \$11.00; 6 ft. Cypress Dahlia Stakes 9c each.

Plant Labels—Wooden, clear paint, for pots. 4 inch, 100, 45c; 1000, \$2.25; 5 inch, 100, 50c; 1000, \$2.95; 6 inch, 100, 60c; 1000, \$3.50; 12 inch, 100, \$1.60; 1000, \$12.95.

Wooden, clear painted, copper wired. Small, doz., 15c; 100, 75c; 1000, \$3.50.

Neponset Paper Pots—2½ inch, doz., 23c; 100, 4 inch, doz., 40c; 100, \$1.65; 6 inch, doz., 40c.

B-B Seed Flats—Made from choice lumber and with patented removable front. Inside dimensions, 12 3/8" x 18 3/8"; each, 75c; dozen, \$8.00.



Ball Plant Bands*—Wooden bands for transplants. 2x2x3 inches, 100, 75c; 500, \$1.75; 1000, \$3.50; 2½x2½x3 inches, 100, 90c; 500, \$1.95; 1000, \$3.75; 3x3x3 inches, 100, \$1.05; 500, \$2.30; 1000, \$4.35. Prices include delivery.

NOTICE

All prices shown in this catalog are subject to change without notice. All offers are subject to stock on hand or our ability to secure.

Suggestions for Ordering

In ordering please give name of item, quantity, and prices. An order blank is enclosed for convenience in ordering and another will be sent with acknowledgement of order.

Payment

Except for established accounts, orders should be accompanied by check or money order. Otherwise shipment will be made C.O.D. and the fee included in the charge. The prices shown do not include Illinois Occupation tax, for which add 2 per cent to total amount of order for goods to be delivered in Illinois.

Shipping

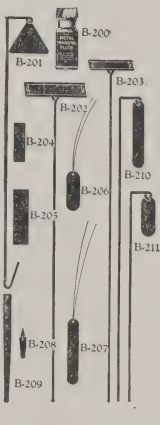
All shipments will be made by most economical means, unless instructed otherwise. Deliveries by truck will be made promptly in accordance with the regular schedule of the trucking concern employed unless a rush delivery is specified.

All prices shown include delivery except as noted for some fertilizers on page 18, but do not include charges necessary for special delivery services.

Disclaimer

We make every possible effort to supply seeds of only the highest quality in every respect. However, because of factors beyond our control after seeds leave our warehouse, we, in common with all other American seed houses, make all sales subject to the seedman's disclaimer as follows:

Permalawn Products Company gives no warranty, expressed or implied, as to description, quality, productiveness, or any other matter of any seeds it sells, and will not be responsible for the crop; and it gives no warranty, expressed or implied, as to fertilizers, other than in respect to analyses or other data expressly and lawfully required of the seller by statutes.



Hotkaps

INDEX

PAGE NO.		PAGE NO.		PAGE NO.	
Auger Handle	12	Knee Pads	28	Saw Accessories	12
Auger, Soil	15	Knives	12	Saws, Pruning	11
Bands, Plant	29	Labels, Plant	29	Seeds, Lawn	2, 3, 4
Blocks	19	Ladders	15	Seeds, Vegetable	
Bird Feeding Shelters	28	Lag Hooks	19	(See Supplement)	
Bits	12	Lawn Edgers	5	Shears, Flower	9
Bit Extensions	12	Lawn Mowers, Hand	5	Shears, Grass	9
Cable	19	Lawn Mowers, Power	5	Shears, Hedge	9
Cable Puller	13	Lawn Rakes	6	Shears, Pruning	10
Calcium Chloride	27	Lawn Seeds	2, 3, 4	Shellac	20
Catchers, Grass	5	Lawn Sweepers	6	Snaps, for saws	12
Chain Attachment	7	Liquid Feeders	6, 13	Soil Soaker	8
Chisels	12	Loop Nuts	19	Spike Disc	6
Coupling, Hose	7, 25	Mallets	19	Sprayers, Hand	26
Cresote Oil	20	Mowers, Lawn	5	Sprayers, Power	24, 25
Cultivators, Hand	28	Mowers, Power	5	Spray Materials	21, 22, 23
Dilution Table	23	Paint, Repellent	27	Spreaders, Seed and	
Dowax	20	Paint, Tree	14, 20	Fertilizer	6
Drill, Tree Feeding	15	Paper Pots	29	Sprinklers	8
Dusters	26	Permalawn Plant Foods	16, 17	Stakes, Plant	29
Dusting Materials	21, 22, 23	Permalawn Seeds	2	Sulky	6
Edgers, Lawn	5	Permalawn Spreader	6	Sweepers, Lawn	6
Ferti-drill	15	Plant Foods	16, 17, 18	Thimbles	19
Fertilizers	16, 17, 18	Plant Labels	29	Tools, Garden	28
Files, Saw	12	Plant Markers	29	Tree Feeding Bars	15
Flats, Garden	29	Plant Stakes	29	Tree Paint	14, 20
Floralife	27	Pole Saw Head	13	Tree Surgeon Saddle	14
Fungicides	21, 22, 23	Power Drill	15	Tree Surgery Supplies	19, 20
Gloves, Garden	28	Power Hammer	15	Tree Wrap	20
Gouges	12	Proportioners	6, 13	Turnbuckles	19
Grafting Wax	20	Protectree Paint	14	Twigger (Pole Saw Head)	13
Grass Catchers	5	Pruners, Hand	10	Twist'ems	29
Grass Hook	9	Pruners, Pole	10	Twine (Garden)	29
Handi-cart	6	Pruning Saws	11	Vegetable Seeds	
Hoes, Garden	28	Ratchet Auger Handle	12	(See Supplement)	
Hormones, Plant	27	Raffia	29	Vitamin B-1	27
Hose, Canvas	28	Rakes, Lawn	6	Washers (Tree Rod)	19
Hose Coupling	7, 25	Red Cap Coupling	7	Water-Wand	28
Hose, Garden	7	Repellents, Animal	27	Wax, Grafting	20
Hot Kaps	29	Rod, Tree	19	Weed Killers	27
Hozon	5-6	Rooting Compounds	27	Wheelbarrow	6
Insecticides	21, 22, 23	Rope	20	Wood Preservative	20
Jointer, for saws	12	Safe-T-Seat	14		

All prices shown are subject to change and orders are accepted subject to stock on hand or available.

PERMALAWN PRODUCTS COMPANY

Formerly Caldwell Seed and Supply Co.

1620 Payne Street

Evanston, Illinois

Better Bred Vegetable Seed

A VICTORY GARDEN ON 500 SQUARE FEET

Cost: Seed, \$2.00; Fertilizer, \$1.50; Disease and Insect Control, \$2.50.

Selected varieties of each seed are furnished with directions for planting and growing.

Kind of Vegetable	No. 10' Rows	Width of Row	When to Seed			Ready to use
			Inside	Outside	Every 2 Weeks	
Tomato	3	2 ft.	March	May		15-18 weeks
Corn	4	2 ft.		May	to July	8- 9 weeks
Peas	4	18 inches		April	to July 15	8- 9 weeks
Beans (green)	4	18 inches		May	to Sept.	6- 8 weeks
Beans (wax)	4	18 inches		May	to Sept.	6- 8 weeks
Beans (Lima)	2	18 inches		May		12-15 weeks
Onion (sets)	1	15 inches		April		6-12 weeks
Onion (seed)	1	15 inches		April		6-12 weeks
Pepper	3/4	15 inches	March	May		15-18 weeks
Parsley	1/4	15 inches		April		10-12 weeks
Swiss Chard	1	15 inches		May		6- 8 weeks
Beets	2	15 inches		May	2nd July 1	6- 8 weeks
Turnip	1	15 inches		April	2nd July 15	8-10 weeks
Carrot	2	15 inches		May	2nd July 1	8- 9 weeks
Lettuce (L)	1	15 inches		April	to Sept.	6- 7 weeks
Radish	1	15 inches		April	to Sept.	4- 5 weeks

Above Assortment, \$2.00

Add beauty to your vegetable garden with the following flowers for cutting and edging. Pkts., 10c each.

WILT RESISTANT ASTERS: The aster is one of the finest annual garden flowers. For early blooms start indoors.

Early Beauty **Giant Branching Comet**
Improved Crego

ALYSSUM: Little Dorrit 3", hardy annual, excellent for borders.

AGERATUM: Blue Cap Miniature, for bedding and borders, one of the best summer plants.

MARGOLD: Yellow Supreme, creamy lemon yellow carnation flowered, sweet scented.

NASTURTIUM: Double Sweet Scented. Golden Gleam and Indian Chief.

PETUNIA: Celestial Rose, excellent for bedding, deep rose, compact.

SALPIGLOSSIS (Painted tongue): Mixed, vein coloring lovely in all blooms.

SCABIOSA (Mourning Bride): Mixed, soft dainty colors.

ZINNIA: Dahlia Flowered, finest of the Zinnias, robust and fully double. The following colors are especially good.

Canary Bird, canary yellow

Dream, rosy lavender

Eldorado, salmon apricot

Exquisite, light rose

Golden Dawn, golden yellow

Illumination, deep rose

Luminosa, bright deep pink

Old Rose, old rose shades

Polar Bear, creamy white

Purple Prince, deep purple.

Finest Mixed

ZINNIA: Lilliput or pompon; Pastel Mixture, delicate pastel shades.

Permalawn Products Company

EVANSTON, ILLINOIS

For Local Orders Call University 2260



Asgrow Stringless Green Pod Beans

BEANS

Plant only in warm, well-prepared soil, about 4 in. apart, $1\frac{1}{2}$ in. to 2 in. deep. Cultivate only before blooming and never when wet. Pick frequently as pods reach maturity, to get full yield. Plant a succession every two weeks to insure supply throughout the season. One pound plants 100 ft. of row.

Note: The abbreviation Pkt. wherever used refers to "Estate Packet" introduced by us this year. The Estate Packet contains about one third the quantity of seed in the smallest weight unit given.

DWARF OR BUSH

GREEN PODDED: pkt., 10c; $\frac{1}{2}$ lb., 20c; 1 lb., 35c; 5 lbs., \$1.15.

***Asgrow Stringless Green Pod:** 53 days. All-America Gold Medal Award. The pods are entirely stringless and fiberless, meaty and richly flavored, attractive dark green in color. The plants are hardy, strong, and dependably productive even under trying weather conditions.

***Asgrow Black Valentine (Stringless):** 49 days. All-America Award 1933. Like the old Black Valentine in every way except that it is completely free from strings. Handsome oval dark green pods which keep their color and firmness well. Plants are large, erect, and prolific. An excellent variety for home and market garden when an early, very hardy bean of fine quality is desired.

***Burpee's Stringless Green Pod:** 52 days. Asgrow originated. The large, bushy plants produce plenty of rich, round, green pods about $5\frac{1}{2}$ inches long, stringless and of fine flavor.

Bountiful: 49 days. Popular early variety with light green flat-oval stringless pods, $6\frac{1}{2}$ to 7 inches long.

Stringless Red Valentine: 54 days. A stringless strain of Red Valentine.

DRY SHELLED VARIETIES: pkt., 10c; 1 lb.,

***Kentucky Wonder Pole:** Plants are very tall, vigorous, and prolific. Pods are round, meaty, fiberless, and brittle, with an excellent and distinctive flavor of their own. They should be picked just as soon as they reach their full size, $7\frac{1}{2}$ to 8 inches long.

WAX PODDED: pkt., 10c; $\frac{1}{2}$ lb., 25c; 1 lb., 40c; 5 lbs., \$1.35.

***Pencil Pod:** 55 days. Asgrow originated. Generally regarded as the finest wax bean either for the market or home garden. Pods are a beautiful golden yellow, 6 to 7 inches long, round and crease backed, fleshy, brittle, stringless, fiberless, tender, and sweet; grown abundantly on stocky, vigorous plants. An early variety of the highest quality and productive over a long period.

Improved Golden Wax: 51 days. Popular in home gardens because of its rich flavor and resistance to disease. Straight, thick-flat, stringless, creamy-yellow pods.

Improved Prolific Black Wax: 52 days. Asgrow originated. Very prolific; pods golden yellow, round, fleshy, stringless, fiberless, and of fine quality.

Kentucky Wonder Pole: 68 days. The most popular of all pole wax pod varieties, nearly stringless.

LIMA BEANS: pkt., 10c; $\frac{1}{2}$ lb., 25c; 1 lb., 45c; 5 lbs., \$1.50: (Except as noted).

***Fordhook Bush:** 75 days. A potato Lima. The plants are strong and vigorous, standing erect and bearing clusters of thick, fibrous pods, each with 3 to 5 large, oval beans of rich flavor.

***Henderson's Bush:** 65 days. A Baby Lima, known in the South as Butter Bean. Early, finest quality. Pkt., 10c; $\frac{1}{2}$ lb., 20c; 1 lb., 35c; 5 lbs., \$1.25.

Improved Burpee's Bush. A few days earlier than Burpee's, larger and more prolific. Clusters of 5 or 6 pods, averaging 4 beans each of excellent quality.

Baby Potato Lima Bean. All America Silver Medal 1939. Pkt., 20c; $\frac{1}{2}$ lb., 45c; 1 lb., 80c. Seeds are small but thick, of bright green color when fresh, and similar in flavor to Fordhook. Plants are very prolific and more vigorous and robust than Henderson's Bush Lima.

King of the Garden Pole: 88 days. Among pole the general favorite for its hardness and vigor. Climbs well and produces a heavy yield of pods containing 4 or 5 large, oval, greenish white beans.

QUALITY BEETS

Beets do best in deep sandy loam. If smooth roots are wanted, **fresh manure must not be used**. Sow about 12 seeds per foot $\frac{1}{2}$ in. deep in drills 18 in. apart, rolling the earth after planting. Thin to 3 to 4 in. apart; to have supplies through the season, plant every 10 days. To preserve for winter use store in cellars or pits, covering them with dry earth or sand topped with straw. All beets: pkt., 10c; $\frac{1}{2}$ oz., 20c; 1 oz., 35c; $\frac{1}{4}$ lb., 85c.

***Asgrow Wonder:** 58 days. All-America Gold Medal 1934. Recognized by this award as a variety of supreme excellence. The All-America citation reads: "Extra early, deepest red all through, semi-flat with rounded bottom, large, extra flavor and quality, smooth skin, 15 in. tops good for bunching". A pedigreed stock, the result of many years of pure line breeding; unsurpassed in earliness, uniformity, and in depth of interior color.

***Detroit Dark Red:** 68 days. Seen at its finest development in the pure-bred Asgrow strain. Tops are small and erect. Roots are globular, uniform, and attractive, with deep red flesh.

Crosby's Egyptian: 60 days. A standard early globe, very popular, with dark red, flat-globe or turnip shaped roots.

Early Wonder: 58 days. Small tops, flattened globe shaped roots.

BRUSSEL SPROUTS

Half Dwarf Improved: 70 days. Stems thickly set with firm cabbage-like balls $1\frac{1}{2}$ inch in diameter, maturing successively. Pkt., 10c; 1 oz., 50c.

BROCCOLI

Pkt., 25c; 1 oz., 75c

***Italian Green Sprouting** (Calabrese): 60 days from setting of plants to marketable heads. The leading variety for home gardens. Plants are tall, strong, and vigorous with attractive compact heads of bluish green.

White Cape: Large, creamy white, firm head of excellent quality.

Purple Cape: For home gardens. Large, compact, somewhat coarse purple head.

CAULIFLOWER

Cauliflower is a member of the cabbage family and should be similarly cultivated. To blanch the head, the outer leaves should be loosely gathered round it and tied. Pkt., 50c; $\frac{1}{8}$ oz., \$1.00.

***Early Snowball:** 55 days. The best and most widely used variety. Dwarf plants with medium sized, solid, pure white heads of finest quality.

***Snowdrift:** 57 days. Somewhat more vigorous and larger than Snowball. Heads deep and exceptionally white, curd of fine texture and free from protruding leaves. Curved inner leaves protect the head until nearly full grown.

CELERY

Pkt., 25c; $\frac{1}{2}$ oz., 60c; 1 oz., \$1.00

***Golden Self-Blanching:** 118 days. A popular variety for the home garden. Medium tall, compact, with thick, crisp, brittle stalks that blanch easily.

***Golden Plume (or Wonderful):** 112 days. Resembles Golden-Self-Blanching but is earlier and larger. Shows considerable resistance to blight and rust. Compact, thick hearts, of excellent flavor.

Giant Pascal: 135 days. A hardier, later, larger sort with solid stalks of nutty flavor and dark green foliage.

CABBAGE

YELLOW-RESISTANT VARIETIES: pkt., 15c; $\frac{1}{2}$ oz., 35c; $\frac{1}{4}$ lb., \$1.60.

***Jersey Queen:** 58 days. Cone shaped head. Home garden favorite.

***Marion Market:** 75 days. Developed from Copenhagen Market but with slightly larger, round, firm heads. Valuable for early kraut.

Wisconsin All-Seasons: 90 days. Similar in type standard All-Seasons but perhaps a little coarser.

STANDARD VARIETIES: pkt., 10c; $\frac{1}{2}$ oz., 25c; $\frac{1}{4}$ lb., \$1.25.

Jersey Wakefield: 63 days. Cone-shaped heads, small and compact, with inside white, crisp, and tender, about $2\frac{1}{4}$ lbs.

***Copenhagen Market:** 69 days. An excellent early variety. Heads round and solid, $3\frac{1}{2}$ to 4 pounds; of superior quality.

Perfection Drumhead Savoy: 90 days. For late plantings. Crinkled dark leaves, solid round heads, of high quality and flavor.

Mammoth Red Rock: 100 days. The largest and best red variety. Large, round, solid heads of purple red color.

CANTALOUPE AND MUSKMELON

Pkt., 10c; 1 oz., 30c; $\frac{1}{4}$ lb., 85c.

Orange or salmon fleshed Varieties

***Hale's Best No. 36:** 80 days. This improved strain has almost entirely replaced the older Hale's Best. It is the earliest and deservedly one of the most popular cantaloupes, oval, sweet, and of very fine quality.

***Honey Rock (or Sugar Rock):** 85 days. Nearly round, about $5\frac{1}{2}$ " diameter and 4 lbs. weight. Thick, juicy, orange-salmon flesh of sweet but not heavy flavor.

Hearts of Gold (or Hoodoo): 94 days. A popular variety, about 5" in diameter and 2 pounds weight. Distinctly ribbed. Juicy, sweet, and aromatic.

Green-fleshed Varieties

Rocky Ford: 92 days. Standard among the other varieties. Strong prolific vines; melons nearly round, about 5" diameter, practically ribless, with sweet green flesh.

SWEET CORN

Pkt., 10c; ½ lb., 20c; 1 lb., 35c; 5 lbs., \$1.15; 10 lbs., \$2.00.



Corn
Asgrow
Golden Colonel

***Asgrow Golden Colonel:** 91 days. All-America Award for 1936. One of the finest varieties. The stalks are sturdy and strong, often with two large ears, well filled with very deep, narrow, irregularly arranged kernels, tender and sweet, of the finest eating quality.

***Golden Bantam:** 80 days. Medium ears with 8 rows of broad, tender kernels exceptional in flavor.

***Bantam Evergreen (Golden Evergreen):** 89 days. Asgrow originated from Golden Bantam and Stowell's Evergreen, yielding large 14 to 18 rowed ears of rich golden yellow. Fine quality.

***Asgrow Improved Golden Bantam** 10-14 rowed: 82 days. Asgrow originated, uniform and very attractive. More productive than regular Golden Bantam; the ears are larger and the kernels remain tender a few days longer.

HYBRIDS

Seed from Hybrids should not be saved for reproduction. Pkg., 15c; ½ lb., 25c; 1 lb., 40c; 5 lbs., \$1.50; 10 lbs., \$2.75.

***Golden Cross Bantam:** 88 days. The best and most adaptable hybrid of its kind—a large main crop sort of the improved Golden Bantam type. Very sturdy and reliable, showing high resistance to bacterial Wilt.

Ioana. 85 days. All America Bronze Medal 1939. Considered one of the best recent developments. Plants are tall and sturdy, ears 7½ to 8 inches long, 12-14 rowed, with medium narrow, light yellow kernels.

***Hybrid 8-Row Blends:** A mechanical mixture of four or more well tested and proven hybrids, all 8-row types. Similar growth habits but of different maturities. Excellent for home gardener giving all advantages of hybrid vigor and quality yet producing edible ears over an extended period.

***Hybrid 12-Row Blends:** Same as above except made of 12-row hybrids.

CARROTS

Pkt., 15c; 1 oz., 85c; ¼ lb., \$2.25

A light, deep soil is best for carrots, preferably fertilized the previous season. New manure and lack of cultivation lead to split and crooked roots. Sow a succession of plantings in rows 14 inches or more apart, thinning out later to 2 to 3 inches between plants. One ounce of seed sows 200 ft. of row.

***Asgrow Imperator:** 77 days. All-America Award for 1933. Specially developed to meet the demand for a long, smooth, handsome carrot. Roots have rounded shoulders and taper uniformly to a semi-blunt end, 7" to 8½" long, rich orange in section, with indistinct core; fine grained, tender, sweet, and of excellent quality.

***Improved Chantenay:** 72 days. A well known and popular all-purpose variety, shorter and thicker than Asgrow Imperator, 5" to 6" long, stump-rooted, deep orange with indistinct core.

***Danvers Half Long. (Long Strain):** 75 days. Bright orange roots, medium in length and shape. Crisp and of good quality.

Nantes Improved Coreless: 70 days. Very trim, cylindrical roots of delicate flavor. Small tops. Excellent for forcing.



Asgrow
Imperator
Carrot

ENDIVE

Pkt., 10c; 1 oz., 20c; ¼ lb., 50c

***Batavian Full Heart:** 90 days. An improved form of the older Batavian Broad leaved. The inside leaves, curly, crisp, and tender, blanch to a creamy white.

EGG PLANT

Can be raised wherever corn and tomatoes do well. Requires loose, fertile soil and will not thrive in clay. Start in hot bed or flats. Prices: Pkt., 15c; ½ oz., 35c; 1 oz., 60c; ¼ lb., \$1.75.

Black Beauty: 80 days from transplanting. Plants 24" to 30" with 4 to 6 large, purplish black fruits, 2 to 3 lbs., which hold color and quality well after picking. The best early variety.

New York Improved Spineless: Fruits a little later and larger than Black Beauty. A popular

CUCUMBER

SALAD VARIETIES: pkt., 10c; 1 oz., 35c; ¼ lb., \$1.00.



Clark's Special Cucumber

***Clark's Special w.s.:** 63 days. All America Award for 1933. Asgrow originated. Handsome, dark green, 9" by 2½", averaging about 2¼ lbs., slightly tapered at both ends; flesh crisp and firm, with few seeds.

***Improved Long Green b.s.:** 70 days. A standard large variety for the home garden; very prolific, hardy and resistant to disease; deep green, 12" by 2½"; white crisp flesh.

Arlington w.s.: 60 days. An older type but very popular for home gardens. Medium green, semi-blunt ends. 8" by 2½".

PICKLING VARIETIES: pkt., 10c; 1 oz., 20c; ¼ lb., 45c. (except as noted).

***National Association b.s.:** 56 days. Originally bred to meet the specifications of the National Pickle Packers Association. Special attention has been given to this important variety at the Asgrow cucumber breeding grounds, and a most desirable strain is being produced; dark green, symmetrical, and nearly square ended.

Chicago Pickling b.s.: 59 days. An old favorite and one of the best for pickling or slicing. Medium green. Very prolific.

KALE

Pkt., 10c; 1 oz., 25c

Dwarf Green Scotch: 55 days. The pedigreed Asgrow strain is one of the most handsome plants of the garden with its widespread plume-like, dark-green leaves, exceptionally finely curled and frilled.

KOHL RABI

Pkt., 10c; 1 oz., 50c; ¼ lb., \$1.50

Early White Vienna: 57 days. Light green bulbs with white flesh. A favorite home and market garden sort—especially for forcing in the hot bed.

Purple Vienna: 62 days. Bulb interior light greenish-white and tender; exterior purple, with purple tinged foliage.

OKRA

Pkt., 10c; 1 oz., 15c; ¼ lb., 25c

***Lady Finger White Velvet:** 55 days. Tall, early and prolific, with long, slender pods, spineless, ribless, and creamy white. A very attractive new variety.

Dwarf Green Long Pod: 50 days. Early and prolific with pods very similar to Tall Green. A good variety for the north.

LETTUCE

Lettuce does not stand hot weather well but is not harmed by mild frosts; the earliest sorts can therefore be transplanted from cold frames to the rows, after hardening by gradual exposure, in the first weeks of spring and the later sorts sown ¼ inch deep in the open then. Rich well-prepared soil is advisable as the plants must be grown quickly. Allow ½ oz., of seed per 100 ft. of row.

HEADING VARIETIES: pkt., 10c; 1 oz., 25c; ¼ lb., 65c.

***New York:** 80 days. (Also called Wonderful). Dark green leaves with well blanched heads, crisp and sweet. The Asgrow strain of this most popular variety is in demand for its large solid heads.

***Iceberg:** 84 days. An excellent large lettuce for home gardens. Heads are kept solid and blanched by the strong inward-curving ribs of the outer leaves.

Big Boston. (White-seeded): 75 days. Very popular; an excellent butter head type. Medium size, compact head with creamy yellow center, leaves tinged with bronze.

All Seasons: 80 days. Stands hot weather well.

New York No. 12: 77 days. Earlier than New York and stands heat better.

LOOSE-LEAVED VARIETIES: pkt., 10c; 1 oz., 20c; ¼ lb., 50c; 1 lb., \$1.70.

***Grand Rapids:** Very popular for greenhouse forcing and early planting; handsome, hardy, and vigorous. Large, light-green, frilled leaves.

Prize Head: A fine old favorite; bronze tinted, crumpled leaves; stands long before going to seed.

Simpson's Curled (Black Seeded): Yellowish green leaves, crisp and very tender.

Simpson's Early Curled: The standard home garden sort, tender and sweet.

White Paris Cos (or Trianon): The favorite cos or romaine lettuce. Upright, solid and conical; light green, crisp and sweet.

PARSLEY

***Moss Curled** (or Triple Curled): Its very dark green leaves are so finely crimped and curled that it looks almost like moss. Extremely decorative. Pkt., 10c; 1 oz., 25c; ¼ lb., 50c

PARSNIP

Hollow Crown: By far the most popular variety. Broad shouldered with pronounced crown and long, tapering white roots; fine-grained, sweet, and tender. Pkt., 10c; 1 oz., 20c; ¼ lb., 45c.

PUMPKIN

Small Sugar (or New England Pie): Pkt., 10c; 2 oz., 25c; ¼ lb., 45c.

MUSTARD

Pkt., 10c; 1 oz., 15c; $\frac{1}{4}$ lb., 25c; 1 lb., 70c

***Southern Giant Curled:** The most popular sort for greens with light green leaves curled and crinkled at edges.

Mustard-Spinach: A mild flavored, oriental type. Foliage may be used for greens when plant is quite young and until fully matured.

ONIONS

Pkt., 15c; $\frac{1}{2}$ oz., 45c; 1 oz., 85c.

The onion is a heavy feeder and, for well-shaped, fully developed bulbs, demands a rich and finely worked soil. It is a hardy plant and seed may be sown early in rows 15 inches apart.

Yellow Varieties

***Southport Yellow Globe** (Brigham strain): 110 days. A hardy late sort, in some sections gradually replacing older strains of Southport Yellow Globe; valued because of its superior keeping qualities. Globe-shaped and solid. Creamy white flesh, fine grained and of mild flavor.

***Yellow Sweet Spanish:** 112 days. Skin is golden yellow but flesh is white, crisp, and mild. A very large, globe-shaped onion, excellent for storage.

Early Yellow Globe: 98 days. The earliest yellow globe, yet productive and a good keeper. Earliness minimizes thrip damage.

Ohio (or Michigan) Yellow Globe: 112 days. Noted for its excellent keeping properties.

Yellow Bermuda. A popular early variety. Attractive bulbs of medium size, light yellow and mild flavor.

White Varieties

Pkt., 15c; $\frac{1}{2}$ oz., 40c; 1 oz., 75c

White Sweet Spanish: 112 days. The largest of the white onions; similar to Yellow Spanish except in color, but not quite as good a keeper. Very mild.

Southport White Globe: 110 days. The standard white onion. Large, round bulbs of very excellent quality and flavor.

White Barletta: 90 days. Early and small; for pickling and green bunching.

Red Varieties

Pkt., 15c; $\frac{1}{2}$ oz., 40c; 1 oz., 70c

Southport Red Globe: 112 days. The best red onion; globular, strong.

Onion Sets—Finest quality.

White, qt., 30c; $\frac{1}{2}$ pk., 60c; 1 pk., \$1.00.

Yellow, qt., 30c; $\frac{1}{2}$ pk., 50c; 1 pk., 90c.

Nod-O-Gen - Dry.

Peas, beans, and sweet peas (garden legumes) grow better if their roots develop healthy colonies of nitrogen fixing bacteria. The inoculation of the seed before planting assures better nodule formation and more vigorous plants. Nod-O-Gen Garden culture, for 5 pounds of seed, 25c.



PEAS

Pkt., 10c; $\frac{1}{2}$ lb., 20c; 1 lb., 35c; 5 lbs., \$1.15



Laxton's Progress Pea

Smooth Seeded Varieties

Asgrow Alaska w.r.: 60 days. Very early, hardy, and productive. Light green pods 3" long with 6 to 8 bluish-green peas.

Laxton's Superb: 60 days. The earliest large-podded dwarf sort. Pods $4\frac{1}{2}$ " long having 9 to 10 peas.

Wrinkled-Seeded Varieties

***World's Record:** 61 days. The Asgrow strain is noted for earliness and large pods each with 7 or 8 peas of finest quality.

***Thomas Laxton, Improved Dark-podded:** 63 days. An excellent medium-early sort; $3\frac{1}{2}$ ", blunt, broad pods with 7 or 8 large, tender peas.

***Asgrow Teton w.r.:** 63 days. All-America Award for 1937. An attractive new introduction resembling Thomas Laxton strain but fully resistant to fusarium wilt. Large, attractive pods, concentrated in season and well filled with peas.

Telephone, Tall Dark-podded w.r.: 74 days. Tall vines with handsome large dark-green pods, 5" long, plump and straight, with 8 to 10 highest quality peas.

***Little Marvel:** 60 days. One of the most prolific of the second early sorts. Pods long, 3 to 4 inches.

***Laxton's Progress:** 62 days. Largest podded and most attractive of the Laxtonian group. Though not planted so early as smooth-seeded varieties, it matures quickly. Handsome dark green pods, $4\frac{1}{2}$ " long with 7 to 9 peas. Dwarf vines.

RADISH



Early Scarlet Globe Radish

Tip: 25 days. Very attractive and popular. Almost globe shaped; carmine-red with white tip and small tap root; sweet and tender flesh.

***Early Scarlet Globe:** 24 days. A very popular variety. Roots globular, very slightly elongated, with medium tops; bright scarlet, crisp, tender, and of fine quality.

***Early Scarlet Globe Special Short Top Strain:** 22 days. For greenhouse forcing. Same as Early Scarlet Globe but with short top.

Early Scarlet Turnip White

For well-shaped radishes the ground should be thoroughly pulverized and enriched with some well-rotted manure and fertilizer. Fresh manure must not be used. First sowings are made very early, with successive sowings up to hot weather. To avoid pithiness the crop should be grown quickly and pulled promptly when mature. Sow in rows 12 to 15 inches apart and $\frac{1}{2}$ inch deep, allowing one ounce to 100 ft. of row. Pkt., 10c; 1 oz., 15c; $\frac{1}{4}$ lb., 35c; 1 lb., \$1.00.

Sparkler: 26 days. Like Scarlet Turnip White Tip but showing more white.

White Icicle: 27 days. The **Asgrow** strain is of superior quality in appearance and mild, delicious flavor, with short tops to allow forcing and close growing. Roots $3\frac{1}{2}$ ", tapering, very white and brittle, growing partly above ground.

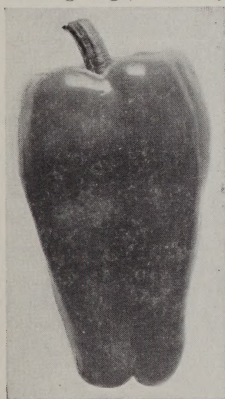
Crimson Giant: 28 days. A larger globe sort, $1\frac{1}{2}$ " by $1\frac{3}{4}$ ", but firm and not hollow or pithy; of excellent quality.

Long Scarlet Short Top: 27 days. Deep scarlet, white fleshed roots 5" to 6" long.

PEPPER

Pkt., 15c; $\frac{1}{2}$ oz., 40c; 1 oz., 70c

***California Wonder:** 75 days. A most attractive late variety. Fruits $4\frac{1}{2}$ " by 4"; 3-4 lobed, smooth, uniform, and dark glossy green at eating stage, with very thick, mild flesh.



Asgrow King Pepper

Pimento (Perfection): 73 days. Heart shaped; used for canning.

***Asgrow King:** 68 days. All-America Special Mention 1935. Bred for size, uniformity, and quality. The fruits are very large, 5" to $5\frac{1}{2}$ " and 3" to 4" across shoulders, tapering, usually 3 lobed and with thick, sweet flesh. Resembles the old Ruby King but is in every respect superior.

Harris' Early Giant: 63 days. Early. Like Bull Nose but larger and longer.

SPINACH

Pkt., 10c; $\frac{1}{4}$ lb., 45c; 1 lb., \$1.25

Sow in rows 12 to 24 inches apart, depending on the method of cultivation, thinning later to 6 inches. Fall sown seed will give an early spring crop and all should be out before hot weather. Sow again in August or September for a fall crop. Allow 2 ounces to 100 ft. of row.

***Bloomsdale Savoy, Long Standing:** 42 days. Excellent, as it stands heat better and remains in cutting condition longer than most others. Very sturdy and uniform plants with large, heavily crumpled, savoyed leaves.

***Giant Nobel (or Giant Thick Leaved):** 45 days. Strong, spreading, long standing plants with very large, thick, deep green leaves. Tender and well flavored.

King of Denmark: 46 days. Large plants with broad, slightly crumpled, dark green leaves. Popular among market gardeners for spring planting as it is slow to bolt and stands in prime condition unusually long.

Summer Savoy: 45 days. All-America Special mention, 1937. Longer standing than Bloomsdale Savoy, and better during the summer.

New Zealand Spinach: 70 days. Not a true spinach but its small, pointed leaves when cooked have the appearance and flavor of spinach. Thrives in summer and forms new leaves after the outer ones have been picked. Soak the seed and sow when the ground is warm. Pkt., 10c; $\frac{1}{4}$ lb., 50c.

RUTABAGA

***American Purple Top (or Long Island Improved):** 88 days. Pkt., 10c; 1 oz., 20c; $\frac{1}{4}$ lb., 50c.

SQUASH

Summer or Bush Varieties

Pkt., 10c; 2 oz., 25c; ¼ lb., 45c

***Early White Bush Scallop (Patty Pan):** 53 days. Eaten when young, the flesh is tender and richly flavored.

***Early Yellow Summer Crookneck:** 50 days. Handsome yellow fruits 9" to 10" long, 4" diameter, with cream-colored flesh.

Great Summer Straightneck: 55 days. Very popular with shippers, as it packs well. In the Asgrow strain, fruits have coveted lemon-yellow color, grow to 18" to 22" by 4½".

Early Yellow Bush Scallop: 58 days. Deep yellow; otherwise like the white.

Giant Summer Crookneck. 56 days. Large fruits.

Winter or Trailing Varieties

Pkt., 10c; 2 oz., 25c; ¼ lb., 45c

Table Queen (or Des Moines): 58 days. A delicious squash, usually baked and served in halves. Fruits about 4½" diameter, acorn shaped but ribbed, dark green with yellowish-orange flesh of very pleasing flavor.

Improved Green Hubbard: 105 days. Standard winter sort. Fruits 12" by 9" pointed at both ends. Flesh very thick, dry, and sweet.

Warted Hubbard: 110 days. Similar but somewhat larger and more heavily warted.

SWISS CHARD

Pkt., 10c; 1 oz., 25c; ¼ lb., 65c

***Lucullus:** The most popular sort. Erect and vigorous, with stout white stalks and large crumpled bright green leaves.

Fordhook Giant: Leaf is dark green, heavily crumpled, white midrib wide and thick. Strong and sturdy grower.

TURNIPS

Pkt., 10c; ¼ lb., 25c; 1 lb., 60c

For summer greens or roots sow early in drills 12 to 15 inches apart for hand cultivation, and press the soil down firmly. Thin out when the plants have grown to about 1 inch high. Sow again in the summer for fall and winter use. Allow one ounce for 100 ft. of row.

***Purple Top White Globe:** 55-60 days. The standard table sort; for market garden, shipping, or home. Large, dark green, cut-leaved tops. Roots 4" to 6" diameter, purple-red above, white below, with white, sweet, tender flesh.

***Shogoin:** A new Variety from Japan which has quickly become very popular. The tops make excellent greens in 30 days and the roots in 40 days are crisp and tender. Its upright foliage stands about 20" and is resistant to aphids. Roots are semiglobular, with white inside and out. Should be eaten when young.

IMPROVED TOMATOES

Pkt., 10c; ¼ oz., 20c; 1 oz., 60c
(except as noted)

Sow in hot beds or indoor flats using fresh soil. Keep the young plants free of insects and about 6 weeks later when danger of frost is past transplant to reasonably rich soil, setting the plants 3 to 4 ft. apart. One ounce will make 1,500 to 2,000 plants. Days given below are from transplanting to picking.

Scarlet Fruited

***Asgrow Scarlet Dawn:** 70 days. All-America Gold Medal 1935. This beautiful early tomato is one of the finest developments of modern vegetable breeding. The vines are of medium growth, fairly open and very prolific. The fruits are globular and smooth, thick-walled, bright scarlet in color, ripening well to the stems. Exceptionally attractive and of rapidly increasing popularity. Pkt., 15c; ¼ oz., 30c; 1 oz., 90c.

***Marglobe:** 77 days. An excellent disease resistant sort. Strong plants with heavy foliage; fruits medium large, nearly globular, smooth, solid, thick-walled, and of deep scarlet.

Greater Baltimore: 82 days. Large vines with medium foliage. Large thick-flat, deep red, solid fruits. Primarily a canner's variety, special attention has been given the Asgrow strain to make it earlier, more uniform, deeper, and free from ridges and cracks.

Beefsteak: (Red Ponderosa or Crimson Cushion); 90 days. The Asgrow strain is wilt-resistant. Very large, flat, scarlet fruits.

Break o' Day: 70 days. Early and wilt-resistant Light Scarlet fruits.

Earliana: 66 days. A first early bright red thick-flat tomato.

John Baer: 70 days. Medium sized fruits, semiglobular, bright scarlet.

Pink and Yellow Fruited

Livingston's Globe: 82 days. Large and smooth fruit. Heavy producer.

Ponderosa: 88 days. Large spreading vines with very big flat fruits, apt to crack but solid, sub-acid, and of excellent flavor.

Oxheart: 90 days. Very large, heart shaped, rosy pink and solid.

Golden Queen: 84 days. Large, golden yellow fruits, flattened, solid, and mild.

Livingston's Globe Greenhouse Forcing: The Asgrow strain of this most satisfactory forcing sort is very popular. Yields heavily and consistently. Fruits are medium size, uniform, and of finest quality. Pkt., 25c; 1 oz., \$2.50.

Small-Fruited:

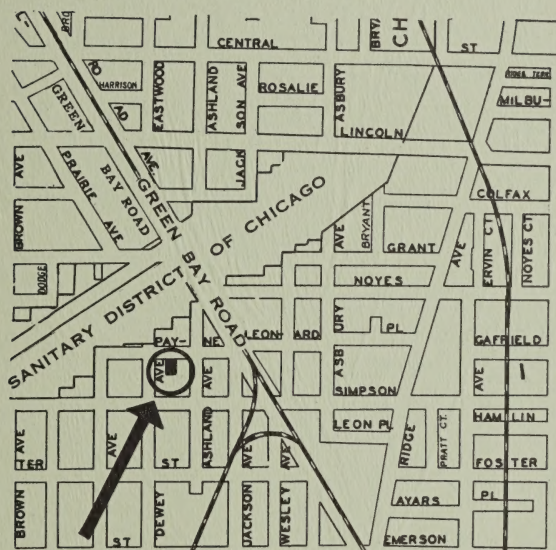
Red Plum, Yellow Plum, Red Pear, Yellow Pear, Red Cherry, Yellow Cherry. These varieties, about 2" long, are used for decorative purposes and in preserves and pickles. Attractive novelties. Their names are indicative of shape and color. Pkt., 10c; ¼ oz., 25c; 1 oz., 75c.

PERMALAWN PRODUCTS COMPANY

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Evanston, Illinois

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Permalawn Products Company

(FORMERLY CALDWELL SEED AND SUPPLY COMPANY)

EVANSTON, ILLINOIS

Prune Your Way to a Better Lawn

By J. F. FONDER

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WHEN damage comes to the well-maintained lawn it's harder to find a reason than it is with the neglected lawn. But it can't be doubted that there's a cause. Importance of the soil as the seat of all evil has been emphasized so much that there's a tendency to look only in this direction. But one must look further.

ONE trouble is our failure to recognize how completely grass is affected by the trees on or around the lawn, the shrub and other border plantings, and, frequently buildings. These cast shade, reflect heat, restrict air movement, increase humidity, compete for soil food and moisture, and perhaps affect grass in other ways we don't yet recognize.

In shaded areas sowing "shade" seed isn't enough. Shade grasses are merely "shade-tolerant" and won't grow without some sunlight or produce as good a lawn in a shaded section as can be developed where sunlight is abundant.

Use the shady seed, of course. But as much as possible, reduce the amount of shading. More or less severe thinning of individual trees and removing some of the lower branches may be all that's needed if the trees are spaced far enough apart to permit early-morning and late-afternoon sun to reach the lawn. If the trees are close together, it's sometimes possible to benefit both the lawn and trees by removing misshapen, damaged or badly crowded individuals. I frequently encounter persons who profess such love for trees that they won't permit them to be trimmed and certainly not removed, even tho they're not good trees and may be damaging other more beautiful specimens. This is foolish. It's better to give a few fine trees every opportunity to develop their beauty than to have a whole forest where a forest isn't desirable. As for thinning and trimming, this usually increases tree health and vigor and reduces danger of disease.

After early-morning or late-afternoon sunlight is admitted, keeping the soil in good physical condition and feeding the trees at least every third year and the grass at least twice a year will go a long way toward developing a good turf. If the offending trees are the neighbor's, all that remains is to take advantage of any possible improvements in the maintenance program or perhaps use ground-covers more shade-tolerant than grass.

BUT what about all of the lawns growing in sunny situations that persist in turning brown each summer? The answer is that maybe the soil isn't all it ought to be. Or maybe—this sounds foolish until you study it—it's lack of ventilation.

Seeking privacy for the outdoor living-room developing a high screening-border planting of shrubs—this lays the foundation for one of our worst lawn problems. These screening-borders shut out the rapid movement of air over the surface of the lawn.

During very hot weather, lawn grasses, like other plants, must transpire a great deal of moisture to cool themselves. If the humidity is also very high, transpiration is checked and the point may be reached where the grass is overheated and suffers scald, which is to plants what sunstroke is to animals.

SCALD is unknown in the arid sections because there the air is always so dry that transpiration is maintained at a high rate. But in humid regions the summer air is frequently close to the saturation point, even on clear days. If a high border planting or a stone wall incloses the lawn and stops cooling and drying breezes from rolling freely across the lawn surface, humidity at the lawn surface may become so great that scald occurs when the sun is intense.

Scald is more common in small, inclosed areas than large ones where ventilation can't be so restricted. It's most severe immediately west of trees or of the house, because these objects cast morning shade over the lawn and prevent drying of the dew until late morning. When sunshine finally strikes such shaded areas, it's intense, and the wet grass scalds before the moisture can evaporate.

There's no treatment for scald, because the trouble isn't caused by a disease organism. Preventive measures can be very helpful. In humid areas remove all clippings in the spring and summer. Rake the areas occasionally to remove all dead grass which might mold and heat around the base of the plants. Clip frequently but not too short. Withhold water during periods of high humidity. In addition, it appears that on scald-susceptible areas frequent light plant-food feedings are better than a single heavy spring application. Slow-acting organic plant foods which provide nitrogen and little else and which break down quickly only at high temperatures are to be frowned upon. When disease appears in conjunction with scald, use a good lawn fungicide, preferably dry.

These preventive measures will probably be partially effective. But the only real relief will come from thinning out or otherwise opening up the encircling borders and reducing their height as much as possible. Perhaps the borders can be eliminated on one or more sides. A high wall of trees on the east side should be reduced in height and thinned drastically to cut early-morning shading to a minimum.

BUT all lawn troubles can't be blamed on soil, shade, or inadequate ventilation. Wide-open lawns in good soil have their troubles, too.

When a well-cared-for lawn is thin and unthrifty, take a look at the mower. Chances are that it cuts too short. All the turf grasses except creeping bent grass grow more vigorously if clipped not shorter than $1\frac{1}{4}$ or $1\frac{1}{2}$ inches. Clipped at this height, they'll become thicker and thicker each year because the leaves are long enough to make the sugar responsible for growth. In contrast, lawns clipped as short as one inch will become thin, poor in color, and more and more the prey of weeds.

It's also important that the grass be maintained at as nearly a uniform height as is possible, so that the supply of sugar will be uniform. This may mean that a properly fed and watered lawn will have to be cut every third day during good growing weather, but it'll pay. Don't ever let grass grow very long and then cut it back severely. This not only produces steminess and browning but cuts off the supply of sugar going into the roots and vegetative parts and may cause them to starve.

WHEN you water, soak, don't sprinkle. Repeated sprinklings produce shallow roots because the plants have no need to send roots deep into the soil in search of water. Make your grass struggle for water to develop an extensive root system; then during summer drouth your grass will have a solid foundation. Revolving sprinklers should remain in one place several hours, continuous sprinklers at least an hour. Then don't water that spot again until the soil is quite dry to a depth of one-half inch. If you do, you'll only defeat your purpose in watering.

IF YOU would have a beautiful lawn, provide good soil, sow the best seed money can buy, feed at proper intervals with a balanced plant food, cut the grass long, water thoroly but less frequently—and let in a little air and sunshine.